

MEMOIRS
OF THE
NATIONAL MUSEUM
OF VICTORIA
MELBOURNE

(World list abbrev. Mem. nat. Mus. Vict.)

No. 24

Issued 18th December, 1959

C. W. BRAZENOR, DIRECTOR

PUBLISHED BY ORDER OF THE TRUSTEES

MELBOURNE

MEMOIRS
OF THE
NATIONAL MUSEUM
OF VICTORIA
MELBOURNE

(World list abbrev. Mem. nat. Mus. Vict.)

No. 24

Issued 18th December, 1959

C. W. BRAZENOR, DIRECTOR

PUBLISHED BY ORDER OF THE TRUSTEES

MELBOURNE

By Authority: A. C. BROOKS, Government Printer, Melbourne.

NATIONAL MUSEUM OF VICTORIA

TRUSTEES

GEORGE FINLAY, Esq., O.B.E., L.D.S., B.D.Sc., F.D.S., R.C.S.(Edin.) (Chairman).
Professor E. S. HILLS, Ph.D., D.Sc., F.R.S., D.I.C., F.A.A. (Deputy Chairman).
Sir FRED THORPE, M.C., E.D. (Treasurer).
Sir IAN CLUNIES-ROSS, C.M.G., D.V.Sc., D.Sc., LL.D.
Sir ARTHUR STEPHENSON, C.M.G., M.C.
Professor S. SUNDERLAND, D.Sc., M.D., B.S., F.R.A.C.S., F.R.A.C.P., F.A.A.
J. C. F. WHARTON, Esq., B.Sc.

Secretary to Trustees:

W. McCALL.

STAFF

DIRECTOR.

C. W. BRAZENOR.

Vertebrate Zoology:

Curator of Mammals: Vacant.

Curator of Birds: A. R. MCEVEY, B.A.

Assistant: A. J. COVENTRY.

Invertebrate Zoology:

Curator of Molluscs: J. HOPE MACPHERSON, M.Sc.

Curator of Insects: A. N. BURNS, M.Sc.

Assistant Curator of Insects: A. NEBOISS, M.Sc.

Assistants: ELIZABETH M. MATHESON.

PATRICIA M. HOGGART.

Anthropology:

Curator of Anthropology: A. MASSOLA, F.R.A.I.

Geology and Palaeontology:

Curator of Minerals: A. W. BEASLEY, M.Sc., Ph.D., D.I.C., F.G.S.

Curator of Fossils: E. D. GILL, B.A., B.D., F.G.S.

Assistants: R. W. T. WILKINS.

R. R. BULL, B.Sc.

Library:

Librarian: JOYCE M. SHAW, B.A.

Preparation:

Senior Preparator: P. C. R. BOSWELL.

Preparators: L. J. CHAPMAN.

M. G. TRAYNOR.

A. STEN.

Clerical:

Secretary to Director: M. J. C. MALONE.

Clerk: J. J. CLARKE.

Typistes: LORRAINE M. KNIGHTS.

PATRICIA C. McCORMICK.

GLADYS M. KAY.

General Assistant:

J. CLEMENTS.

HONORARY ASSOCIATES

Ornithology:

C. AUSTIN, Esq.

C. W. BRYANT, Esq.

R. P. COOPER, Esq.

N. J. FAVALORO, Esq.

N. F. LEARMONTH, Esq.

Herpetology:

C. TANNER, Esq.

Entomology:

R. DOBSON, Esq.

TARLTON RAYMENT, Esq.

F. E. WILSON, Esq.

Arachnology:

L. S. G. BUTLER, Esq.

R. A. DUNN, Esq.

HONORARY ASSOCIATES—*continued*.

Conchology:

C. J. GABRIEL, ESQ.

Ethnology:

H. R. BALFOUR, ESQ.

D. A. CASEY, ESQ.

S. R. MITCHELL, ESQ

Mineralogy:

Dr. G. BAKER.

S. R. MITCHELL, ESQ

Palaeontology:

A. A. BAKER, ESQ.

A. C. COLLINS, ESQ.

Dr. ISOBEL COOKSON.

Mrs. B. K. NADEAU.

B. TINDALE, ESQ.

CONTENTS

	Page
Sir Baldwin Spencer's Recordings of Australian Aboriginal Music by Alice M. Moyle	7
Further Discoveries on Victorian Plecoptera by A. Neboiss	37
Tertiary Fossil Fern from Victoria by Edmund D. Gill and Kathleen M. McWhae	45
New Gasteropods from North Australia by J. Hope Macpherson ..	51
Brenthidae of the Australian Region by Karl E. Schedl	59
Australian Bark and Timber Beetles by Karl E. Schedl	67
Australites from Kanagulk, Telangatuk East and Toolando, Western Victoria by George Baker	69
New Caddis Fly from Tasmania by A. Neboiss	91
A new Species of <i>Cypraea</i> , Subgenus <i>Notocypraea</i> by R. J. Griffiths ..	97
Bibliography of Literature upon Victorian Aborigines by Aldo Massola ..	103

SIR BALDWIN SPENCER'S RECORDINGS OF AUSTRALIAN ABORIGINAL SINGING.

*By Alice M. Moyle**, M.A.(Syd.).Mus.Bac.(Melb.).

	PAGE
1. Spencer's references to the recordings ..	8
2. Accompanying Instruments	13
3. Vocal Features	16
4. Record Annotations	19
5. Other recordings located in Adelaide (list only)	28
6. Transcriptions (14 examples)	33

INTRODUCTORY NOTE.

Sir Baldwin Spencer's phonograph recordings (1901 and 1912) in the National Museum of Victoria were dubbed on tape in July, 1957. I auditioned these and made a few fragmentary transcriptions during a short visit to Melbourne the following August.

Considering the age and inevitable crystallising of the wax cylinders, sound-transcription is remarkably successful. This was achieved by fixing a diamond stylus from the original reproducing head to a crystal pick-up. Surface noise was reduced by filtering. Except in one or two places (see Record Annotations) the singing with "stick" and "conch" accompaniment may be clearly heard.

To check tape announcements (by the audio engineer) with Spencer's own spelling of the aboriginal titles, I was granted permission to visit the Museum's strong room where the cylinder collection was kept. There I found 4 large 4½ inch (internal diameter) and 26 small 2 inch cylinders. Numbers, dates and titles, presumably in Spencer's hand, were written on the outsides of the cardboard box covers. Most of the small boxes were marked N.T.1912.

Three titles on the larger boxes did not agree entirely with Spencer's spoken titles as I had just heard them on tapes. I was interested to note that these corresponded with some in another set of records made by Spencer in 1901 which I had previously heard in Adelaide (1956), also dubbed on tape.

At some stage in their history, the 1901 cylinders—including possible duplicates—became divided and the box covers changed about. Those in Adelaide (Section 5), which are fitted in a carrying case with felt-lined lid and cylinder supports, were probably selected for a special purpose.

* Mrs. JOHN MOYLE, author of "Know Your Orchestra" (Cheshire's) which she wrote as Alice Brown.

At the commencement of each Record Annotation will be found my copy of Spencer's box number, title and comments. Some were not easily deciphered and I may have misinterpreted these.

ACKNOWLEDGMENTS.

The following musical analysis forms part of a project on the intervallic structure of Australian aboriginal singing undertaken in the Department of Music, University of Sydney, with assistance from the University Research Grant.

Acknowledgment is also made to the Director of the National Museum of Victoria, Mr. C. W. Brazenor, who kept me informed of re-recording proceedings, and, on my arrival in Melbourne, supplied me with a first-class machine for playing the tapes.

I. SPENCER'S REFERENCES TO THE RECORDINGS.

W. Baldwin Spencer made his first recordings of Australian aboriginal singing at Stevenson's Creek and Charlotte Waters in March and April, 1901. As pioneer in this field, his claim (1928, p. 355) has not been disputed.

An earlier collection of wax cylinders was played before the Royal Society of Tasmania in 1899, but the singer's mother was allegedly a Tasmanian aborigine.¹

Spencer's recordings were made on a large Edison phonograph, the gift of Dr. Angus Johnson in Adelaide and with the cinematograph used on the same expedition, it was regarded at the time as "magnificent equipment" (Thomas, 1901).

After taking the train from Adelaide to the terminus at Oodnadatta Spencer, then Professor of Biology at the University of Melbourne, and F. J. Gillen, Special Magistrate and Sub-Protector of the S.A. Aborigines, followed the telegraph line to Alice Springs. During this earlier stage of their journey, which proceeded further north, the 4½ inch cylinder-recordings were made.

The novelty of hearing themselves "played back" at first alarmed the aborigines but Spencer and Gillen soon found, as others have done since, that little coaxing was needed to get them to sing near the machine. Children were always too shy to perform—the reason, perhaps, for the disappointing dearth of children's singing in all record collections.

¹ Fed. Record Library, A.B.C. Sydney 4 songs on 16 inch disc.

Comparing Spencer's method of recording with his own, Davies (1927) believed that better results could be obtained by selecting and bringing one or two natives to the phonograph horn than by attempting to record the entire group.

It is true that Professor Davies obtained good vocal definition this way, although the instrumental accompaniments on his recordings² are not always audible.

From Spencer's records, many of which have captured the sound of accompaniments such as calls, thuds and other percussive noises, a clear impression may be obtained of the general style of the ceremony and of the song's actual part in it. And, despite these background sounds, melodic outlines are not obscured. Moreover, "actuality" recordings, in which Professor Elkin has also specialised, can demonstrate (with the help of descriptive notes made on the spot) the parts taken by soloists, group and, to some extent, dancers. Recorded male and female voices are not always clearly distinguishable. Some female voices have a harsh, chest quality, others are nasal and strident, depending, no doubt, on the age of the women. Two women's corroborees may be heard on Spencer's cylinders Nos. 9 and 16 (1912).

In his diary (1901) Spencer gives an account of conditions under which the first records were made. Extracts which refer to the phonograph are given below:—

Camp 4—Stevenson River.

March 22 The phonograph is a beauty! It was given to us in Adelaide and we can both take records with it and repeat them as soon as they are taken. Gillen and myself felt quite happy to be amongst the blacks again and to hear the old corroboree songs once more and I don't know whether we or the natives were the more excited.

Camp 9—Charlotte Waters.

March 28 This evening we have had the phonograph at work again and shall soon have done with this and shall send it back again. It has been a success and we have got some good corroboree songs.

March 29 Today we have been at work again with the phonograph. First of all we got 2 lubras to talk as if they were having a quarrel which they did in real earnest and then we made them end up with a peal of laughter.

² Col. (Aust.) PRX 9-11 (12 inch standard).

The language they used can't well be translated but it sounds splendid. After that we did the same with two men, but it is not quite so good. Then the women sang corroboree songs . . .

- March 30 The natives have not come in yet and all we can do is wait patiently for them. I have the cinematograph ready to work when they do come. They are going to give us some rain dances during which they will wear great big head dresses and look very grotesque.
- March 31 . . . Last night we got some more phonograph records—one or two especially good rain songs in which two men imitated at intervals the cry of the curlew which came with the rain.
- April 1 The natives are gradually coming in . . . they have promised to give us a corroboree tomorrow so that I shall have the chance of using the cinematograph for the first time.
- April 2 The natives came in bringing some special sticks like huge bull-roarers from a place about 25 miles off. They are now decorating them with designs in red ochre and charcoal and white clay in a quiet spot down by the water-hole so that the women cannot see them. They are going to perform tomorrow.
- April 3 . . . in the evening we had the natives up for a last go at the phonograph. We only had material for three songs and when we had taken these and let the men hear them we packed the machines and records up ready to go back to Adelaide by a team starting down in the morning.

Spencer makes further reference to the 1901 records: (1928 Vol. I: 361):

The wax cylinders that we had to use were so large—they were between 5 and 6 inches in diameter³—that I was afraid to risk carrying them further north, not only because of the heat, but because of travel on camel-back, which was the only means of transport, so I thought it safer to use them all whilst we were in camp at Charlotte Waters, pack them up and send them south from there, so as to avoid as much travel on camel-back as possible. As it was, 8 out of the 36, despite careful packing, were cracked and spoiled during transit.

³This would be a generous estimate of the external diameter A.M.



The total number of wax cylinders used during Spencer's excursions to Katherine River, Oenpelli and Bathurst Island in 1912 is not known. But more of these smaller reels appear to have survived transit from the Northern Territory and other possible hazards. By 1912, phonographic equipment was lighter, more compact and the cylinders more durable. Twenty-six of these have been successfully dubbed on tape, not excluding three unidentified specimens.

For verifying the dates of some of the later recordings, further quotation is made from Wanderings in Wild Australia (Vol. II:891ff):

After our motor trip (from Katherine to the Gulf of Carpentaria then south to Newcastle Waters) Dr. Gilruth⁴ had gone to Darwin and I stayed behind at the Katherine waiting for Cahill, who came in from the Roper on October 26th. I had sent down to Melbourne for a phonograph and fortunately it had come in time for Cahill to bring it with him, so we managed to secure some good results of native corroborees and ceremonial songs.

- Nov. 4 We packed up and today Cahill and myself started off for the Flora River, when we hoped to come in contact with one or two tribes, more especially the Waduman and Mudburra who live in the Victoria River country. (See records Nos. 12 and 21 A.M.)

On November 29th, 1912, Spencer left Darwin for Bathurst Island.

- Dec. 2 (Bathurst Island) . . . I had brought the phonograph over so we were able to get not only cinematograph records of the dancing, which include the usual ones, buffalo, crocodile and sailing boat, but also very interesting phonograph records of the songs associated with the ceremony. (See records Nos. 3, 4, 6, 16 and 20 A.M.)

An entry in Spencer's diary for Saturday, October 26th—Monday, November 4th, 1912, at the Katherine Telegraph Station, reads:

. . . With the aid of Cahill I have got some very good phonograph records here . . . They are the same as Gillen and I got before with just slight differences (marginal note: really are quite different) in that one or two of them are more interesting because a kind of trumpet made out of a hollow branch was used.

⁴Dr. J. A. Gilruth, Administrator of the Northern Territory.

II. ACCOMPANYING INSTRUMENTS.

Sound-accompaniments to the singing are profuse in the 1912 series of recordings.

Apart from vocal accompaniments, which include ceremonial calls and shouts, a variety of rhythmical percussive sounds are audible such as claps, thuds (stamping?) and the striking together of special pieces of wood or "sticks".

These rhythm sticks are of various shapes and sizes and have been observed in Central Australia (Spencer 1899, p. 604) and in Arnhem Land (Elkin 1953, p. 94). An especially heavy pair was recorded by C. P. Mountford on Groote Eylandt (picture on p. 31).

Peculiar clattering sounds betray the presence of boomerangs which are struck together, two to each player. In the record titles these are apparently included among the "sticks". Singing to the accompaniment of beaten boomerangs—broader, flatter and more curved than the sharp-angled, returning type (see picture p. 31)—has been recorded many times in the centre, also in the west and north of the continent.

Also recorded on the 1912 series are accompanying sounds made by the "conch", Spencer's name for the Australian wooden trumpet, currently called the "didjeridu"* (p. 32).

Spencer's recordings of the "conch" are important. Those from Bathurst Island (cylinder Nos. 4 and 6) point to a wider distribution of this "aerophone" (Sachs 1940) than is indicated by later recordings from Arnhem Land and the Kimberleys. And the sample from the Katherine (Cylinder No. 24), in which several "conches" deliver high-pitched, unmusical sounds is unique among Australian records. These, surely, are the "horn blasts" to which Davies (1927) referred.

In style, the Nabakawulla conch accompaniment (Cylinder No. 6) is similar to didjeridu droning in the west and north-west of Arnhem Land. (Transcription Ex. 4 and Record Annotations to Cylinder No. 6 p. 21.)

The Bathurst Island performances may have resulted from a recent importation of the trumpet from the mainland. It is possible that didjeridu players from Port Essington accompanied Cooper to Melville Island. Spencer however, says nothing of a

* Dr. H. Basebow (1925). The first writer to use the term "didgeridoo", observed that the player blew with a vibratory motion of the lips and at the same time sputtered into the tube indistinct words which sound like "tidjarudu, tidjarudu, tidjaruda" (p. 375).

new importation. On the contrary, he seems to imply a widespread and already well-established use of the conch on Bathurst and Melville Islands.

The other conch accompaniment from Bathurst Island (Cylinder No. 4) shows more variation. In addition to sustained notes (Trans. Ex. 3c) there are notes of shorter duration, a fifth higher in pitch. Didjeridu accompaniments sounding two notes of different pitch have reached a more advanced musical stage in the rhythmic "obbligatos" of north-east Arnhem Land. Transcriptions of some of these have been made by Jones (1956).

High-pitched conch "blasts" in the "Tjadpa" corroboree (cylinder No. 24) do not resemble the upper partial, or "hoot" notes audible in didjeridu recordings which Professor Elkin made in north-east Arnhem Land. Sound-distortion during recording could not be wholly responsible for the cruder effects on the wax-cylinder No. 24.

An eye-witness account at the time of recording may have supplied the missing information. Now the listener can only guess at the cause. The "blasts" may have been produced from a short tube; the method of blowing may have differed; or the blowers may have been learners.

Exact measurements of individual trumpets, since recorded in various places in the north, are not available. Experimenting myself, with a tube which measured 3 ft. 8½ in. in length, 1 in. internal diameter at mouth end and 1½ in. internal diameter at other end, I was able to produce several notes, the strongest of which was approximately 82 cycles, or the first "E" below the Bass stave. In contrast to this the pitch of the recorded "blasts" is approximately E/5 (660 cycles).

Spencer's use of the term "conch" may have been prompted by a knowledge of the wooden trumpets of New Guinea (Haddon 1917), some of which were representations of the coastal conch or "shell trumpet". Although Spencer makes no direct reference to these his comment (1928 Vol. II.) on the instrument played by the Bathurst and Melville Islanders implies comparison: It is "commonly called a trumpet by the whites, but really a kind of conch, made out of a hollow bough".

Elsewhere (1914), Spencer mentions two types of trumpets, (1) those made out of a hollow branch of gum trees, ironwood, etc., and (2) those made from bamboo. (p. 389).

"In the case of the gum trees there is no difficulty in regard to the hollowing out. It is very rare, in any of the northern parts

of the Territory to find any branches which are not hollow, so that the native can easily secure one that is suitable for a trumpet ”.

“ In the bamboo, the partitions that pass across the nodes have to be removed by means of a fire stick. As a general rule, the mouth end is coated with wax so that the lips can fit on tightly ” (p. 391).

Spencer noticed considerable variation in the ability of tribal trumpeters. “ In the Kakadu, for example, there is one man who is notably good and will imitate wonderfully well the calls of various birds such as the native companion. When in camp he is constantly asked to perform and the natives listen to him by the hour ”. (p. 390).

Trumpet imitations of bird calls were also noted by Roth who alludes (1902) to an aboriginal legend about a wooden trumpet used “ by certain sprites for that purpose long before they themselves (the aborigines) knew how to use it ”.

The Queensland trumpet, or “ yiki-yiki ” was heard in areas defined by Roth, which included part of Cape York Peninsula, also Bloomfield. Sometimes it measured 7-9 feet in length and was played resting on a forked stick. Unlike the bull-roarer, the yiki-yiki was not excluded from camp singing among north-east Australian tribes.

Only a few wooden trumpets have been reported as far south. Keith Kennedy (1933) saw one at Geraldton W.A. in 1925.

The “ ilpirra ” or “ ulpirra ”, a tube of shorter length, which Spencer and Gillen described as “ a rudimentary trumpet ” was used by central tribes in love-magic ceremonies.

Spencer and Gillen implied that the ilpirra was not a tone-producing instrument but one used merely to “ intensify ” the singing voice. (1899: p. 607.)

Voice-disguising for magic purposes, aided by different kinds of resonators, is not unknown among primitive peoples. This may well have been practised at some period in Australia, especially where “ tubes ” were plentiful. At the same time the practice does not necessarily rule out the possibility of musical tone produced by normal (lip-reed) aerophonic vibration, i.e., by blowing through tightened lips thus causing the air to vibrate within the tube.

At Alice Springs, during the “ Atnimokita corroboree ”, Dr. Stirling (1894) saw a trumpet which measured 2 feet in length, diameter at larger end $2\frac{1}{2}$ inches, at mouth end 2 inches ”.⁵ On the

⁵ A similar specimen is exhibited in the Nat. Mus. of Victoria.

third night of the ritual, he heard "dismal notes" extracted from "a straight wood trumpet made out of a piece of mallee (Euc. sp.) from which the heart wood had been eaten out by termites" (Vol. IV. p. 756).

And in the section on Musical Instruments (p. 100) Stirling (a physiologist) reported that "by sending the voice through the trumpet the reverberations of the naso-pharynx were intensified and a *monotonous droning sound* produced" (my italics).

In attempting to answer the question whether the Central ilpirra "players" achieved tonal results resembling those of the Arnhem Land wooden trumpets, Stirling's description must be considered; also Spencer's and Gillen's descriptive terms, "rudimentary trumpet" and "primitive conch".

"Monotonous droning" could be loosely applied to some styles of northern didjeridu playing, including Spencer's recording of the "conch" on Bathurst Island (No. 6.).

The "primitive conch" of Central Australia may have produced "blasts" as well as droning, although there is nothing in Spencer's writings to indicate this.

Unfortunately no recordings have come to light of an ilpirra or a yiki-yiki accompaniment. The chances that any were made are remote. But it does seem likely that the production of basic tube tone (not necessarily with present-day Arnhem Land refinements) has been more widely practised in Australia than available recordings indicate.

Compared with the more general distribution of "stick" and boomerang accompaniments it could be argued that the wooden trumpet accompaniment to aboriginal singing is a later comer to the Australian musical scene. Its frequent employment in Arnhem Land suggests that the instrument (or the idea of using it) entered the continent here from the north, possibly as a wooden imitation of the shell trumpet. Then, highly favoured in song and dance ceremonies, it doubtless spread east through the Gulf country (Roth), west to the Kimberleys and south as far as the MacDonnell ranges.

III. VOCAL FEATURES.

In recent years, with improved equipment, several collections of recorded aboriginal singing have been made in the centre and the north, regions well-studied by anthropologists.

Collections from the east and south-east are woefully sparse but in all we have enough to show common vocal tendencies, differing styles of accompaniment, even possible "stages" in melodic development⁶.

There are few exceptions in Spencer's recordings to the Australian song procedure of commencing at the highest note and ending on the lowest. And none of these substantially alters the downward direction of the singing.

Many of the monotone chants also demonstrate this prevailing tendency by annexing intervals which fall in pitch.

The rhythmic reiteration of the ground tone (Trans. 10a, 11) and the retracing of steps about the upper vocal boundary (Trans. 4, 8, 11) are also common Australian characteristics.

Careful analysis is needed to distinguish between the multiplicity of song-descents which, taken together, constitute one "song-cycle" or full song-ceremony. Noticable variation in the mode, or intervallic sequence, musically distinguishes one cycle from another, and there are also smaller differences to be found between one song-descent and the next (Trans. 3a, 3b).

Ascending intervals occur, either because of a retracing of steps to prolong the descent, or—more rarely—as prefixes to the main descent (Trans. 3c, bars 1-4 and 10a, bars 1-2).

One song-descent may immediately follow another at a higher pitch, necessitating a wide vocal leap from the ground tone of the first descent to the second apex (Cylinder Nos. 18, 26, 27). Singing in this "north-western"⁶ style has been recorded in Western Australia (near Broome) and on the west coast of the Northern Territory.

I have labelled these recurring vocal leaps (from ground-tone back to the original apex) "ambit" intervals.

Paradoxically, "ambit" intervals are not melodic intervals. They may be known only after the melodic descent has been completed (Trans. 2). The "ambit" is more than a theoretical abstraction, such as scale or compass; its function from one song descent to the next, in the strong downward "pull" to the ground-tone and released swing upwards, is best described as "magnetic".

Tones above the ambit (Trans. 8, 11) may be regarded as an accessory to the main descent.

⁶The Intervallic Structure of Australian Aboriginal Singing (M.A. Thesis 1957).

An ambit of a certain size may be associated with songs recorded in one particular region, e.g., the minor third ambit of some of the Central Australian songs. And, as one might expect, the ambits of the "Arunji" recordings which Spencer made in 1912 (Nos. 2, 8, 15, 18, 19, 25, 26 and 27) are the same (octave).

There have been instances of changes in the intervallie sequence of song-descents in the same song-cycle recorded on more than one occasion. This was so with the Warranggan (Djauan tribe) corroboree (not unlike Spencer's "Arunji") which Elkin recorded in 1949 and again in 1952. (Jones 1956.)

The resemblance of aboriginal song-descents to diatonic modes in Western musical theory has frequently been noted. Similarities noted here (see Record Annotations Nos. 3, 6, etc. 1912) are based on immediate aural estimates.

Accurate measurement of the recorded frequencies, and calculation of the intervals in cents is beyond the scope of the present study. The use of such terms here as "octaves", "fifths", "major thirds", "minor thirds", etc. indicate intervals closest in effect to their equal-tempered equivalents.

If played on the piano, the accompanying musical examples will only vaguely copy the actual sounds. Transcribed examples therefore are intended merely as a pointer to the singing.

In Spencer's collections I have found, so far, only one instance of a "pentatonic" mode of descent. This occurs in the third and fourth song-descents of the Bathurst Island corroboree. It is to be found on Cylinder No. 4 in the 1912 series (Trans. 3b). The descending intervallie sequence here is: tone (major 2nd); minor third: tone: semitone. This sequence is not that of "anhemitonic" pentatonism associated with the black keys of the piano.

Among the earlier (1901) cylinders is a short, repeated polka-like phrase which immediately attracts the ear. Compared with irregular or "free" aboriginal rhythms this strict, isometric sample has an unusually tuneful quality. (Tape III., first of the large cylinders. Trans. 13).

A large proportion of monotone chanting is to be heard on these earlier recordings. Time patterns (Trans. 14) are closely related to the repeated word-or syllable-groups.

In the accompanying transcriptions the sung syllables, or "song-texts" have been omitted. These may be difficult to obtain⁷, and intelligible translations, still more so.

⁷ Spencer (1928) transcribed a few song-texts.

Musicological importance of the sung syllables lies not with their meaning—which, even if known may not be constant—but in their number, rhythm and repetition.

Within one song-descent a short “text” may be wholly repeated, partially repeated and with additions which may be spontaneous. It often becomes apparent that changes in the song rhythms are paralleled by changes in the syllable groups.

A particular “verse” style may well be a vital determinant in aboriginal song-style; conversely, the style of the singing may substantially alter the length of the syllables in the “text”.

In unwritten singing of this kind close investigation of the relation between melody and “text” is necessary for a full understanding of the nature of each. Musicological advance along these lines will need linguistic reinforcement. But it is still possible—indeed it is a necessary preliminary—to first examine the intervallic and rhythmic elements of the sung tones in their separation from the syllables.

IV. RECORD ANNOTATIONS.

A brief description of the singing and accompaniment as heard on each cylinder is given below. Spencer's numbers and titles, as I deciphered them from notes written on the outsides of the cylinder-containers, are included to aid identification. Except for No. 9, which comes first, the smaller 1912 cylinders have been dubbed in numerical order. The four earlier cylinders follow these at the end of Tape III. and the beginning of Tape IV.

Tape I.

Box-title: No. 9 Woman's Corroboree, Katherine Creek, N.T., 1912.

Female group singing. Percussive accompaniment, which does not synchronize, is probably produced by clapping or striking the thighs with cupped hands, a common practice among aboriginal women during singing and dancing.

The “ambit” interval (see vocal features) is a 5th. The 6th above is heard in its role of *appoggiatura*, and is slurred in its descent to the 5th. (Example 1.) Other notes in the descent are not as clearly distinguishable. Irregular grouping of the time-units (notated as crotchets) is not an unusual feature in Australian singing. Bar-lines are added merely to aid recognition of recurring groups. No accentuation is implied.

The date, 1/11/12, found inscribed on the cylinder, is announced on the tape.

Box-title: No. 1 Corroboree, Katherine River, N.T., 1912 Sticks, one voice, final shriek.

Solo chanting on one tone. Approximate pitch A/3^s (Top line Bass stave). Group-shouting, yells and thuds ultimately resolve into a swinging (3/4) rhythm. Yells preceded by short shouts are frequently heard in Northern Territory ceremonies. The total effect is not unlike a loud, concerted sneeze.

Box-title No. 2: Arunji (Snake Corroboree), Katherine Creek, N.T., 1917 (?) sticks good.

(The figure 7 is surely intended for 2. In the Melbourne Museum's collection, no other records are so dated.)

The "sticks" may be boomerangs—or assisted by boomerangs—(Accompanying Instruments). These slow down to a beat of longer duration when the ground tone is reached. The "ambit" interval is an octave. There are two structural intervals of a fourth (Ex. 2). Each song-descent is varied to some extent as it passes through these two conjunct "tetrachords" of (approximately) one tone, semitone, tone each. The first tetrachord—or partial descent to the "dominant" (8765)—is heard three times, the second (5432) twice, before the ground tone (E flat) is reached.

Arranged in consecutive order, the tones of the "Arunji" corroboree—or part-corroboree—resemble those of the ancient Greek Hypophrygian, or mediaeval Mixolydian mode. c.f. Cylinder No. 25.

Box-title No. 3: Yoi-i, Bathurst Island, shrieks, &c., sticks.

(On Bathurst and Melville Islands, Yoi, means corroboree.) Referring to Spencer's spelling Colin Simpson (1951: 145) suggests that it indicates not a flat "yoy" but "yoi" with "a lively little *e* sound whipping off at the end.")

Solo monotone chanting is similar to that on Cylinder No. 1 and punctuated by group yelling, &c. The accompanying clatter is probably that of boomerangs. A unanimous yell (pitched about an octave above the chanting tone) ends the vocalizing.

Box-title: No. 4 Bathurst Island, 1912, Corroboree Conch, sticks.

This is without doubt the most colourful performance Spencer recorded. The singing rises to an unmistakable climax and the wooden trumpet or "conch" (see Accompanying Instruments) provides co-ordinate accompaniment throughout.

Of the eight vocal descents recorded on the cylinder, the third and fourth (Ex. 3b) offer substantially different melodic material from the first and second (Ex. 3a). The eighth, with its rhapsodic style, rise in pitch and extension of the ambit, stands apart from the rest (Ex. 3c). Before this (presumably) last descent of the cycle there is a prefixed ascent which extends the full range to an octave. There is also a second, subordinate descent commencing of bar 18 which is prefixed by (i) an ascending augmented 4th and (ii) a minor 3rd. The mode of descent resembles that of the ancient Greek Hypolydian (Mediaeval Lydian) and the heavily outlined "sharpened fourth" (bars 10-11, 12-13) contrasts with previous structural "perfect" fourths (Example 3b, bars 1-12, 18-21).

From the fifth to the seventh song-descents, the accompanying conch sounds are of short, instead of long duration and are pitched a 5th higher (not shown in Transcription). In the eighth descent the conch reverts to the first pitch and concludes the cycle with quickened staccato sounds. The accompaniment is shared with sticks and thuds (stamping?).

Box-title: No. 5 Larappi Corroboree, Nallakun tribe. Oct. 10, 1912, N.T.
Sticks (no conch on), poor.

No corresponding record.

Box-title: No. 6 Nabakawulla, Bathurst Is., N.T., 1912, Conch, recitative, final shout.

The conch accompaniment in the Nabakawulla corroboree is similar in style to didjeridu accompaniments recorded north-west of Arnhem Land^o. "Tremolo", vibrant tones, difficult to convey in music notation, accompany each song-descent and extend beyond. With the sticks they provide connecting instrumental tissue between the end of one song-descent and the beginning of the next (Ex. 4). Spencer's "recitative" probably applies to groups of five equal tones which alternate with two of longer duration. Small ornaments decorate the vocal descents which finally become more like glissandos.

A structural interval of a 4th (bars 11-12) is linked conjunctly to one of a 5th (bars 5-6) after the manner of the ancient Greek Hypomixolydian and mediaeval Phrygian modes.

Box-title: No. 7 Wait Ba Oenpelli.
Fair.

The cylinder in this box was broken. No. 11 contains relevant material and may have been a duplicate.

^o Elkin, Sydney University Series IB; Simpson (A.B.C.) Series Side 1. Cut 2.

Box-title: No. 8 Djauan Tribe, Arunji Corroboree (shrieks), Katherine River, 1912.

Sticks good.

These "sticks" provide accompaniment in rapid beats (quavers) or in beats of double duration (quaver, quaver rest).

The ambit is an octave with an accessory tone above. The full vocal descent approximates the major mode.

Box-title: No. 9 Women's Corroboree, Katherine Creek, N.T., 1912.

The corresponding cylinder was dubbed first on the tape. See above.

Box-title: No. 10 Nuba-la-mil-la Corroboree, Kakadu Tribe, Cepelli, N.T., 1912.

In their sequence and variation the song-descents of this cylinder exhibit unusually complex structure. In the first vocal section (Ex. 5a¹ and a²), the ambit is a 6th. At the end of the first descent there is a rare ascent of one tone to the "ground-tone", which in this case is best termed the "finale". In the second vocal section (5b) there is an ascent beyond the ambit, the magnetic "pull" being temporarily upwards. A further coda-like section descends a 5th below the "finale" suggesting the key of A minor (5c).

Relation between vocal and stick beats is (approximately) 4 to 3. Vocal rhythm is numerical not accentual (Sachs 1953: 46). At the conclusion of the vocal descents, the stick accompaniment is effectively varied to produce a clear, isolated "ping".

Many stick accompaniments to aboriginal singing might appear to go their own way. This is not so in the Kakadu ceremony where the stick beater co-operates with the singers intelligently and effectively.

Box-title: No. 11 Boy's initiation. "Wait Ba", Oenpelli, 1912. Jamba; Fair.

(The "Jamba" is the first of five ceremonies for the Kakadu man (1928: 891). This is followed by the "Ober, Jangoan, Kilor and Muraian". "Wait Ba" is the refrain of calls by the women during the initiation ceremony.)

In the singing, the ambit is a fourth with an accessory tone above. Following the first melodic section, there is a long succession of calls, after which short-compass singing is resumed.

TAPE II.

Box-title: No. 12 Warangu (*more likely Warangin*) Corroboree, Waduman Tribe, 1912.

Very fair, voices good.

(15/11/12 announced on tape.)

Melodic line is again determined by a 5th, the descent being made in short stages. Pitch of the singing is unusually high. Stick beat pattern is iambic, i.e., in triplets with the third sound omitted (c.f. Jones: 265). In the "Warangu" corroboree there are features which parallel Elkin's recordings of the Djaun Warranggan Corroboree.

Box-title: No. 13 We-ipa Corroboree, Yukal Tribe, N.T., 1912.

(8/10/12 announced on tape. But as Spencer's phonograph was not operating until 26/10/12 (see Section 2) the first figure 2, must have been missed.)

Minor 3rd is the encompassing interval. Similar short song-descents, repeated as here with upper accessory tones, are to be heard in Central Australian recordings by Davies, also by Elkin and Villemint (Elkin 1957).

Rhythmic patterning (quaver, two crotchets, three quavers, &c.) suggests syncopation. The percussive accompaniment is probably hand and thigh clapping by women.

Box-title: No. 14 Wallugu Corroboree, Waduman Tribe 15/11/12.
Good conch.

There is no corresponding cylinder on the tape. It will be noted that the same tribe sings on No. 12, though without a "conch".

Box-title: No. 15 Women's Corroboree (Snake), Katherine River, 1912.
Voices good.

(28/10/12 announced on tape.)

The song-descents are major in mode, passing through the full octave, then a sixth. Ambit, mode and rhythm of the singing resemble later Waranggan recordings (Elkin). For commencing vocal rhythm, see Ex. 6.

Box-title: No. 16 Nabaka Walla, Bathurst Island, 1912.
Good.

Unlike Cylinder No. 6, there is no conch accompaniment on this Bathurst Island recording. Monotone chanting ends in a descent to the 4th below and in this respect resembles samples of Melville Island chanting recorded by C. P. Mountford. But

unlike Mountford's samples Spencer's have no ascending prefix. No. 16 is a damaged cylinder. Despite surface noise percussion (stamps?) is audible.

No. 17 was not among the box-titles.

Box-title: No. 18 Arunji (Snake) Corroboree, Katherine River, 1912.

Voice, good sticks.

Again the "good sticks" sounded like a typical boomerang accompaniment. After prolonged recitation on the uppermost note, singing descends through degrees corresponding to those of the major scale. Higher descents follow and then a return to the first. In comparison with single descents, these two- and three-fold descents are innovations in melodic form. I have termed this style of singing "north-western". (c.f. Ex. 12).

Box-title: No. 19 Djaun Tribe, Arunji Corroboree, Katherine Creek, 1912.

Sticks very good.

Singing again revolves round the octave ambit, with repetitions of the uppermost note. The regular rhythm of the sticks, in groups of three equal beats, synchronises with familiar (3/4) patterns in the vocal part (Dotted crotchet, quaver, crotchet; minim, crotchet, &c.).

Box-title: No. 20 Nabakawalla Corroboree (grave posts) Bathurst Is., 1912.

Good; single voice, yell; sticks good.

Solo monotone chanting at unusually high pitch. Other chanters follow the soloist. High-pitched (Tremolo) calls are probably executed with hand striking the lips. Percussion accompaniment by (probably) several boomerangs. For rhythmic patterning, see Ex. 7.

Box-title: No. 21 Gumbil Corroboree, Waduman Tribe, N.T., 1912.

Voice; shouts.

(15/11/12 announced on tape.)

Group chanting on two tones a minor 3rd apart. Approximate pitch E flat/3 and G flat/3. There are similarities here to Waranggan and Kunapipi two-note chanting.

Box-title: No. 22 Wijudju Corroboree, Binbinga Tribe, N.T., 1912.

Conch and sticks; good conch.

Group singing. Octave ambit with one accessory tone (Ex. 8). Also additional shorter descents, not transcribed. Regular rhythm characterizes the singing on this cylinder. The

short, staccato, "pedal" accompaniment of the conch lacks the variety of the Bathurst Island corroboree (No. 4). For stick and conch rhythm only (synchronized), see Ex. 9.

TAPE III.

Box-title: No. 23 Lurkan (mourning ceremony) Mara Tribe, N.T.

Sticks only: good.

The continuous stick beats (quavers) do not synchronize regularly with the vocal rhythm. At the conclusion of the song-descent they are heard, solo, in a short trochaic passage. (Ex. 10b.) The singing commences and ends on the same pitch, thus eliminating the "ambit" interval, which is rare (Ex. 10a.) As mentioned previously, ascents prefixed to the song descent are unusual in Australian singing. Professor Davies recorded prefixed ascents (Aranda "Wild Dog" songs), but they proceed gradually by tones and semitones (i.e., conjunct) not as the Lurkan ascent which is disjunct and sounds the "broken" minor triad.

Box-title: No. 24 . . . rumung . . .¹⁰ Tribe, Tjad-pa Corroboree, Katherine River, 1912.

The "conches" play a peculiar role in the Tjad-pa corroboree. Their plurality is unique among other recordings of single trumpets. And the effect, which is that of signalling rather than an accompaniment to the singing, is quite un-Australian by comparison.

The first "blast" approximates the pitch of E flat/5 (top space in Treble) and is not unlike a Sydney ferry siren.¹¹ A solo voice is then heard chanting about an octave lower. A chorus of "blasts" then follows, but in the *mêlée* of yells and shouts it is not easy to separate these from the rest. Unlike the orderly drone accompaniments of the Arnhem Land recordings, the effect here is unmusical.

Box-title: No. 25 Djauan Tribe, Arunji Corroboree, Katherine River N. T. 1912.

No conch on; faint (or fair?)

The vocal part descends one octave. An upper accessory note is slurred in descent. Singing is distinguished by long pauses, first on the 8th, then on the 6th (above the ground tone). Retracing of the last few notes of the descent is not an uncommon vocal feature in Australia. (Ex. 11.) In the course of the

¹⁰ Partly obliterated title.

¹¹ But higher and more piercing than "steamboat whistle" effects in other didjeridu accompaniments mentioned by Jones (1957).

descent, a flattened seventh suggests the mediaeval Mixolydian mode. Later, the sticks strike up a trochaic rhythm with tremolo extensions and the vocal part proceeds in a similar (3/8) time.

Box-title: No. 26 Djaun Tribe, Arunji Corroboree, Katherine River 1912.
Sticks good.

After the first descent (octave) voices leap to a note a major 7th above the preceding apex. (Ex. 12.) This second peak, which is not pitched unanimously, begins a new descent and classifies the singing as "northwestern" in style. (See Vocal features.) Rhythm of the percussion runs counter to that of the singing.

Box-title: No. 27 Arunji (Snake) Corroboree, Katherine River, 1912.

Conversation begins this recording.

Singing follows, similar in style to No. 26.

Three unidentified cylinders: (Xa, Xb, Xc.).

(As announced on tape, the first of these is the only black wax cylinder in the collection.)

Xa. Two sections of short-compass singing are here separated by a call more than an octave higher in pitch. (Approximately F sharp/4.) The second section is marked by a quicker rumba-like rhythm. Singing here is comparable with that on No. 11.

Xb. A single voice, a poor native specimen, reiterates two tones with audible intakes of breath. A descent is then made through the remainder of the short compass (4th). Accompanying percussion may be stamps.

Xc. Recorded laughter and a specimen of European singing indicate that the third of these unidentified cylinders need not be taken seriously here.

FOUR LARGE 1901 CYLINDERS.

Inscribed on the cardboard boxes which housed these cylinders were handwritten titles only one of which (the first) corresponded with the recorded material.

Box-titles were:—

No. 2 Arunta Tribe

"Corroboree Song", Charlotte Waters (2) not good.

No. 5 Arunta Song

Rainmaking song

Call of Plover (Pil-Pilpa) Charlotte Waters

Good plover call, rain song.

(On one side of this box was written "Men dancing around the performers").

No. 6 Arunta Tribe, March 28, 1901

Women's Corrob. (2 women). Good.

No. 7 Charlotte Waters, March 30, 1901

Song relating to the tradition of the great snake of Okilcha.*

First Large Cylinder.

(Tape announcement refers to small piece of paper found glued to inside of cylinder bearing the number 2. (c.f. first box-title).

Spencer's voice is heard announcing the title: "A corroboree song of the Arunta Tribe recorded at Charlotte Waters, April 3, 1901". Then follows a solo male voice singing a short-phrased tune with an ambit of a 4th. The polka-like rhythm is strictly maintained and the minor 3rd rise, which occurs within the phrase, gives it melodic shape (Ex. 13).

Towards the end of the cylinder there is a decline in pitch and pace. Singing ends—or is cut off—abruptly.

Second Large Cylinder.

No Box-title corresponds to the recorded material, which may follow No. 18 in the Adelaide set. (See Section 5).

Spencer is heard saying: "Another initiatory song known as the Lallory(?) song". Monotone chanting is approximately A flat/3. Each "verse" commences with a short, decorative and descending slide. An intake of breath is audible at the end of each prolonged chant. Due to variation in speed on the original recording (referred to on tape by the audio engineer) there is a marked rise in pitch. This technical fault highlights breath intakes. A crack in the cylinder causes repetition at the end.

TAPE IV.

Third Large Cylinder.

Spencer announces: "A song relating to the tradition of the great snake man of Okilcha, recorded at Charlotte waters, March 31st, 1901.

It is possible that one of the box-titles given above (No. 7), was intended for this cylinder, although there is a slight discrepancy in the date. Dates coincide, however, in Titles No. 7 (Melbourne) and No. 23 (Adelaide). Although immediate

* Mr. T. G. H. STREHLOW, of the University of Adelaide, kindly informs me that Akiltja (phonetic spelling) is an important carpet snake totemic centre some miles east of Charlotte Waters.

comparison of sound material has yet to be made, according to rough notes made the previous year in Adelaide, monotone chanting on this third cylinder may be a duplicate of Adelaide No. 23. For rhythmic patterning (13 units) see Ex. 14.

Fourth Large Cylinder.

The sound material on the fourth and last of the large cylinders corresponds with the side inscription (plover calls) on Box No. 5. Spencer's spoken comments contain the words "men dancing around the performers" (c.f. No. 12 of Adelaide Set). There is no singing on this record. A chorus of voices call "Wha! Wha!", a characteristic feature of Aranda ceremonies.

The cylinder concludes with ten sentences, said first in English by Spencer, then in dialect by an aborigine.

V. OTHER RECORDINGS LOCATED IN ADELAIDE

Twelve of Spencer's 1901 cylinders, which had been in the possession of the Royal Geographical Society of Australia for many years, were handed over to M. J. Barret¹² in 1955. At the present time they are in the care of the Board for Anthropological Research, University of Adelaide. With assistance from the Australian Broadcasting Commission, Mr. Barret made a tape transcription of two of the cylinders. These were successful and he later arranged for further dubbings to be made. On each occasion the cylinders were played on a large Edison phonograph at the Museum of Applied Arts and Sciences, Sydney, N.S.W.

I am indebted to Mr. G. Lawton¹³ for supplying me with the following list:—

- No. 1. Unintha Corroboree.
Stevenson Creek.
- No. 6. Song sung by the old men at Initiatory Rite of
Young men.
Stevenson Creek
22nd March, 1901.
- No. 8. Song of the Chitchingalta Corroboree.
Stevenson Creek
22nd March, 1901.
- No. 11. Song of the Erkita Corroboree.
Arunta Tribe
Stevenson Creek
22nd March, 1901.

12. Then President of the Anthropological Society of South Australia.

13. Reader in Geography, University of Adelaide.

- No. 12. Special Exclamations used at Sacred Ceremonials,
by men dancing around the performers.
- No. 13. Song of the Kurnmara Corroboree.
Arunta Tribe
Charlotte Waters
28th March, 1901.
- No. 17. Women quarrelling.
Two songs by women
Arunta tribe
Charlotte Waters
29th March, 1901.
- No. 18. Two initiatory Songs of the Arunta Tribe.
Charlotte Waters
3rd April, 1901.
- No. 19. Men quarrelling.
(Recorded 29th March, see Section 1.)
- No. 21. Sacred Song of the Rain Totem.
Sung by two men of the Totem.
(Plover Imitations)
Charlotte Waters
30th March, 1901.
- No. 23. Song relating to the tradition of
The Great Snake of Okilcha
Charlotte Waters
30th March, 1901.

(Nos. 18 and 23 were found fractured longitudinally from end to end; No. 19 was in several pieces).

REFERENCES CITED.

- Basedow, H., 1925.—The Australian Aboriginal.
- Davies, E. H., 1927.—Aboriginal Songs. *Transactions of the Royal Society of South Australia*. L1: 81.
- , 1932.—Aboriginal Songs of Central and Southern Australia. *Oceania*, 11: 454-67.
- Elkin, A. P., 1953.—Arnhem Land Music. *Oceania*, XXIV.: 81-109.
- , 1954.—Arnhem Land Music. *Oceania*, XXV.: 74-121.
- , 1957.—Australian and New Guinea Musical Records. *Oceania*, XXVIII.: 1-30.
- Haddon, A. C., 1917.—Notes on the Wooden Trumpet in Netherlands New Guinea and on the Sepik River. *Man (R.A.I.)*, 1917, No. 56.
- Jones, T., 1956.—Musical Survey (of Arnhem Land) Pt. 1. *Oceania*, XXVI.: 252-339.
- , 1957.—Musical Survey (of Arnhem Land) Pt. 2. *Oceania*, XXVIII.: 1.30.

- Kennedy, K., 1933.—Instruments of music used by the Australian Aboriginies.
Mankind, 1: 147-57.
- Roth, W. E., 1902.—North Queensland Ethnography Bulletin. 4: 23.
- Spencer, W. B.; Gillen, F. J., 1899.—Native Tribes of Central Australia.
———, 1901.—Papers, Mitchell Library, Sydney, N.S.W.
———, 1914.—Native Tribes of the Northern Territory of Australia.
———, 1928.—Wanderings in Wild Australia.
- Sachs, C., 1940.—The History of Musical Instruments.
———, 1953.—Rhythm and Tempo.
- Simpson, C., 1951.—Adam in Ochre.
- Stirling, E. C., 1894.—Report on Horn Scientific Expedition, Vol. IV.
- Thomas, N. W., 1901.—The Australian Ethnological Expedition. *Man*, No. 67-82.



1. Aluridja man (Cent. Aust.) accompanies a song-ceremony with boomerangs (ceremonial type).

[From the Australian Aboriginal, Basedow.]

2. C. P. Mountford recording on Groote Eylandt. The singer accompanies himself with two heavy sticks.

[From National Geographic Magazine, 1949.]



3. The Australian Wooden Trumpet or Didjeridu (N. Terr.) The player's lips are within the smaller end of the hollow branch.

[From the Australian Aboriginal, Basedow.]

4. Scene in the Gber Ceremony, Kakadu Tribe. The man on the left is blowing the "Conch".

[From Wanderings in Wild Australia, Spencer.]

Ex. 1. (1912 No. 9)



Ex. 2. (No. 2)



Ex. 3a. (No. 4)



3b. (3rd song-descent)



? — Doubt regarding accuracy of transcription

Bar-lines — Added to aid recognition of recurring time groups
(Do not imply regular accentuation)

Pitch — A/4 = 440 v.p.s. (rough checks made with violin pitch pipe)

b — Less than a semitone

θ — Hummed (closed mouth) effect

V — Breath intake

3c. (8th song-descent)

VOICES
 STICKS
 * STAMPS
 CONCH

The score is written for four parts: VOICES, STICKS, * STAMPS, and CONCH. It consists of three systems of staves. The first system covers measures 1 to 10, with a measure rest in measure 10. The second system covers measures 11 to 20, with a measure rest in measure 20. The third system covers measures 21 to 30, with a measure rest in measure 30. The VOICES part features a descending melodic line with various ornaments and fingerings (2, 5, 10, (h)). The STICKS part consists of rhythmic patterns, including a sequence of eighth notes in measure 1 and a series of slanted lines representing rhythmic strokes. The * STAMPS part shows a series of slanted lines representing rhythmic stamps. The CONCH part features a series of eighth notes.

* Transcribed from 1st song-descent

Ex. 4. (1912 No. 6)

VOICES
 STICKS
 CONCH

The score is written for three parts: VOICES, STICKS, and CONCH. It consists of two systems of staves. The first system covers measures 1 to 10, with a measure rest in measure 10. The second system covers measures 11 to 20, with a measure rest in measure 20. The VOICES part features a descending melodic line with various ornaments and fingerings (2, 5, 4). The STICKS part consists of rhythmic patterns, including a sequence of eighth notes in measure 1 and a series of slanted lines representing rhythmic strokes. The CONCH part features a series of eighth notes.

Ex. 5a* (Kakadu No. 10)

VOICES
 STICKS

The score is written for two parts: VOICES and STICKS. It consists of one system of staves. The VOICES part features a descending melodic line with various ornaments and fingerings (2, 5, 4). The STICKS part consists of rhythmic patterns, including a sequence of eighth notes in measure 1 and a series of slanted lines representing rhythmic strokes.

5a²

VOICES

STICKS

5b

VOICES

STICKS

etc.

5c

Ex. 6. (Time-pattern only, No. 15)

Ex. 7 (ditto No. 20)

Ex. 8

Ex. 9

STICKS

CONCH

etc.

Ex. 10a. (No. 23)

10b. (Solo stick-beats)

Ex. 11. (No. 25)

(Later song-descents rhythmically varied) . .

Ex. 12. (No. 26)

approximate pitches

"ombi"

Ex. 13. (1901 No. 1)



Ex. 14. (1901 No. 3 rhythm)



FURTHER DISCOVERIES ON VICTORIAN PLECOPTERA

*By A. Neboiss, M.Sc., F.R.E.S., Assistant Curator of Insects,
National Museum of Victoria.*

(Manuscript received March, 1958)

SUMMARY.

Through an intensive search in the Victorian Alps more specimens of the rare stone-flies *Thaumatoperla alpina* Burns & Neboiss, and *Thaumatoperla flaveola* Burns & Neboiss were discovered by the author. As these species were known from three females in the first, and a unique male in the second case, the opposite sexes are here designated as allotypes and described. The nymph of *T. flaveola* is also described.

DESCRIPTIONS.

Thaumatoperla alpina Burns & Neboiss.

Thaumatoperla alpina Burns & Neboiss, 1957, Mem.Nat.Mus.Vict. 21 : 93.

It was surprising that a large stone-fly like *T. alpina* had not been captured until 1954, when the first specimen, a female, was brought to the National Museum of Victoria for identification. There was a long delay in publishing the description of this rare and scientifically interesting species, and during this period two more female specimens were brought to the National Museum. The authors were thus able to include additional information in their paper and designate the newly discovered specimens as paratypes.

As the 1957 collecting season, in the early part of which these last specimens were taken, was still favourable, the author undertook field study in the Victorian Alps to obtain more detailed information of the habitat, secure some information on life history, and search for the male sex which was still unknown.

The work was limited to an area of about 15-20 square miles on the Bogong high plains, of at least 4,000 feet above the sea level. The only accessible road was that built for S.E.C. use.

Typical to the Victorian Alps, this district is characterized by steep mountain slopes, narrow gullies, and small rushing streams. The original specimen was taken above the tree line some 50 yards from the nearest water, while the others came

from near a stream in forested country. This information suggested that the most suitable locality should be near the tree line.

Every accessible stream on this altitude was therefore carefully searched, and while a number of species of caddis-flies (*Trichoptera*) and an interesting osmylid (*Neuroptera*) species were collected, no signs of the large stone-fly were found. Eventually an uninteresting looking stream on grassy slopes of Mt. Mackay at an altitude of approximately 5,500 feet yielded a pair of the beautiful stone-flies. They were disturbed by beating the vegetation along the still pools, and fell into the water, separating quickly from each other.

Further investigation of the stream gave another three female specimens which were photographed in their natural surroundings (Plate 1, Figs. 1 and 2), and secured for the collection. Unfortunately only the one male was found. It is interesting to note that all specimens except the first pair were discovered resting on the leaves of silky daisy—*Celmisia sericophylla*, an alpine plant described by J. H. Willis from the Victorian Alps in 1954. Later it was observed that the stone-flies in captivity chewed the leaves of the silky daisy; whether this is due to interrupted natural life and shock of captivity, or whether it is natural behaviour, is not certain, and observations in the natural surroundings are to be desired.

Most specimens were found resting on the upper surface of the leaves in bright sunshine. When disturbed they partially opened their wings, slightly lifting them to an angle, at the same time curling their body upwards and moving the cerci upright. None of the specimens attempted to fly, but crawled slightly deeper between the foliage of the plants. The walking movements are smooth and can be rather fast, as it was later demonstrated in the laboratory. The insects appear to be more active in the dusk or even at night.

All attempts to discover the nymphs, in spite of careful examination of a large number of stones in the rapid parts of the stream as well as from the bottom of the still pools, proved to be unsuccessful.

DESCRIPTION OF THE MALE.

General appearance very similar to the female, but noticeably smaller. Measurements in mm. are given hereunder for comparison of the male with the female specimens available for study.

	♂ (allotype)		♀ ♀ (incl. holotype)	
Prothorax—				
Width	6.5	..	8.0–9.0	
Length	5.0	..	8.0–8.5	
Anterior wing—				
Length	17.5	..	20.0–21.5	
Width	7.0	..	9.5–11.0	
Posterior wing—				
Length	15.0	..	18.0–19.0	
Width	13.0	..	16.0	
Antenna—				
Length	19.0	..	22.5–26.0	
Cerci—				
Length	18.5	..	20.0–23.0	

Head black, nitid, sculptured; the greyish spot on each side of the frontal suture near the base of the antennae absent (it is not quite so distinct also in the other female specimens, as it is in the holotype). Antennae black, 19 mm. long, with 57 segments. The number of antennal segments appear to be rather stable in all specimens and usually is between 52 and 57.

Prothorax slightly wider than long, but bears the same characteristic black oval central marking, and the bright orange colour of the prothorax which, in dried specimens, changes to a dull orange brown.

Abdomen cylindrical, somewhat flattened dorso-ventrally, pale yellowish grey, but the colouring is partly lost in dried specimens. On account of the softness of the body the length measurements are very variable, and often do not give the true impression of the actual size. Ventral surface yellowish grey in the first segments, further the colour gradually contracts to the posterior margin of the segment, whereas the anterior portion is black. Ninth and tenth segments black. Copulatory processes short. Cerci black, 18.5 mm. long, with 32 segments.

Anterior wings anilin black, dull; costal area with numerous irregular veins. Posterior wings black, with dark blue iridescence; most of the cross-veins in the anal area are bordered with a whitish translucent border, so giving a netted appearance.

Legs black; median and posterior tibiae covered with very fine decumbent yellowish pubescence.

MATERIAL EXAMINED.

Allotype ♂ and 4 ♀ ♀ Mt. Mackay, 5,500 feet, Vic., 23rd March, 1957, A. Neboiss; deposited in the collection of the National Museum of Victoria.

Thaumatoperla flaveola Burns & Neboiss.

Thaumatoperla flaveola Burns & Neboiss, 1957, Mem.Nat.Mus.
Vict. 21 : 95.

Following the successful 1956-57 season, and the discovery of more specimens of *T. alpina*, the author concentrated the search during 1957-58 season to obtain additional information and more specimens of *T. flaveola*, up to the present known from a unique male specimen.

While visiting the type locality early in November, 1957, two small nymphs were found, and the typical form of prothorax and its sculpture clearly indicated them as being *T. flaveola*. On the second occasion, towards the end of March, 1958, final instar nymphs as well as adult specimens were found. Based on these discoveries and the nymphs collected by I. F. Edwards in January, 1958, the descriptions of nymph and adult female are given hereunder. The adult specimens were captured in late afternoon some 12-15 feet above the stream on tree fern fronds.

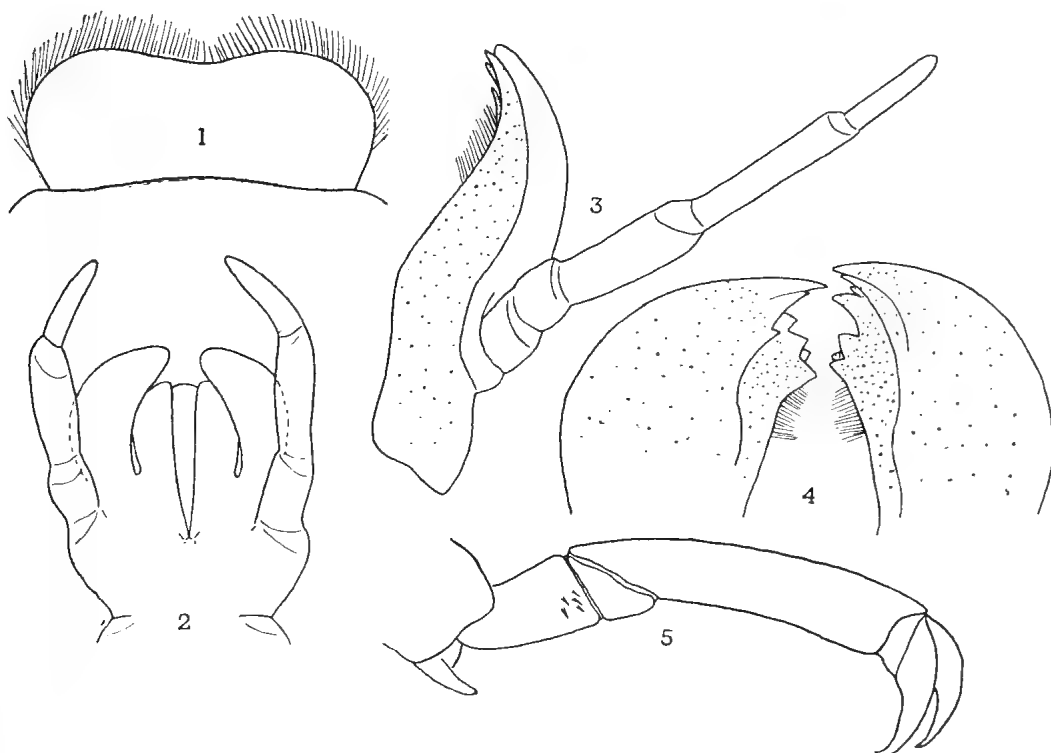
DESCRIPTION OF THE NYMPH.

General colour olive, legs paler olive, cerci and antennae yellowish brown, ventral side yellowish to orange brown, about 26-30 mm. long. Body irregularly clothed with finer and stouter bristles, which are arranged in a single row along the posterior margin of each abdominal segment, more densely along the lateral line, finer and more hairlike on the ventral surface.

Head olive, as broad as pronotum, widest at the posterior end, narrowed anteriorly. A row of short, stiff bristles just behind the eyes. Antennae about 15 mm. long, filiform, tapering, first segment large, second smaller with a row of bristles covering the anterior margin, the following six or seven segments very short, inseparable, becoming progressively narrower and longer towards the apex. The number of segments exceeds 100 (in the adult specimens it is reduced to about 60). Labrum short and broad, shape as in Fig. 1. Labium, Fig. 2, with glossae shorter than paraglossae, the latter covered with rather long hairs on the

external margin. Labial palpus three segmented; first segment short, second about twice as long as first, third about $\frac{2}{3}$ the length of second. Maxilla Fig. 3, well developed, lacinia with a pair of pointed teeth near the apex, and a row of bristles on the inner margin. Maxillary palpus five segmented, first and second segments very short, about equal in length, third slightly longer than the first and second together, fourth the longest, fifth shorter than third and about equal of the first and second together. Mandibles very strong, Fig. 4, with a number of pointed teeth at the apex, and orally of them a row of bristles on the inner margin.

Pronotum olive, with paler olive ornamentation, anterior margin brownish olive. A row of short and stiff bristles all round the margin of the pronotum except the anterior median portion where the bristles are less dense or almost absent.



FIGS. 1-5. *Thaumatoperla flaveola* B. & N. Nymphal structures. 1. Labrum. 2. Labium. 3. Maxilla. 4. Mandibles. 5. Posterior tarsus.

Legs pale olive, moderately long, femur shorter than tibia in the prothoracic legs, about equal in length in meso—and metathoracic legs. First tarsal segment short, second incomplete, shorter than first, third more than twice as long as the first and second together, touches the first dorsally; claws simple. (Fig. 5).

Abdomen somewhat cylindrical, depressed dorso-ventrally. Ninth segment the longest, tenth shorter about equal in length to the seventh. First six segments each with a pair of lateral gills in the form of somewhat knotted filaments, bluish green. Cerci yellowish brown 12—15 mm. long, with 23—28 segments. First few segments very short, the following ones becoming longer and narrower towards the apex. Each segment bears an encircling row of spines around the posterior margin.

The nymphs were found on submerged logs and stones in a small stream on Mt. Buller, Victoria (type locality) 8th November, 1957, A. Neboiss; 17th January, 1958, I. F. Edwards, and 25th March, 1958, A. Neboiss; the fully grown nymphs were collected on the two latter dates.

Description of the female.

The females of this species, similar to the other two species in this genus, are distinctly larger than the males, but the colouring in both sexes is identical. Measurements in mm. are given hereunder for comparison of the two sexes.

	♂ ♂ (incl. holotype)		♀ ♀ (incl. allotype)	
Prothorax—				
Width	..	6.5– 7.0	..	8.5– 8.8
Length	..	4.5– 4.8	..	6.0– 6.8
Anterior wing—				
Length	..	16.0–17.0	..	21.0–22.0
Width	..	7.0– 8.0	..	10.0–10.5
Posterior wing—				
Length	..	16.0–16.5	..	20.0–21.0
Width	..	13.0–14.0	..	18.5–19.5
Antennae—				
Length	..	17.0–20.0	..	23.0–24.0
Cerci—				
Length	..	15.0–17.0	..	16.0–18.0

Head about as wide as the pronotum, dark yellowish brown, eyes black, a pair of pale yellowish brown oval markings on either side of the median line, the distance between the markings is about the same as between the markings and eyes. Antennae black 23–24 mm. long, with 56–64 segments.

Pronotum brownish olive, shiny, covered with very fine pubescence except for the median line and irregular pattern lines; somewhat circular sculptured depressions on either side of the median line. Legs brownish black, with the exception of meso- and metathoracic femora which are yellowish brown.



Abdomen cylindrical, somewhat flattened dorso-ventrally, olive black, not quite as shiny as in the males; ninth and tenth tergites dark yellowish olive, shiny. Subgenital plate broader than long, apical margin straight, dark yellowish olive. Sub-anal plates somewhat triangular, black. Cerci black, 16–18 mm. long, with 28–30 segments.

Anterior wings olive brown with dark grey area in the centre which reaches the posterior margin, the veins in this area are bordered with olive brown, so that each cellule is dark, surrounded by an olive brown line. Posterior wings dark grey, costal margin and apex, as far as the cubital veins, olive brown. Cross veins in the anal area bordered with whitish translucent line.

MATERIAL EXAMINED.

Allotype ♀ ; 1 ♀ and 3 ♂ ♂ White falls, Mt. Buller, Vic., 25th March, 1958, A. Neboiss; deposited in the collection of the National Museum of Victoria.

ACKNOWLEDGMENTS.

Much valuable data for this work was supplied by Mr. McComb, of Melbourne University; great assistance was also given by the staff of the State Electricity Commission of Victoria (S.E.C.) both at Melbourne and Mt. Beauty, and by Mr. I. F. Edwards, of Geelong Grammar School, Timbertop, near Mansfield. To all of them the author expresses the most sincere thanks.

EXPLANATION OF PLATES.

(Photographs by the Author.)

FIG. 1. General view of the locality near Mt. Mackay. Clumps of silky daisy are on the edge of the stream.

FIG. 2. Close view of a clump of silky daisy with a specimen of *Thaumatoperla alpina* B. & N. on a leaf.

TERTIARY FOSSIL FERN FROM VICTORIA, AUSTRALIA.

By *Edmund D. Gill, Curator of Fossils, National Museum of Victoria, and Kathleen M. McWhae (née Pike), Western Australia.*

ABSTRACT.

The type specimen of the early Tertiary fern *Cyclosorus Dargoensis* (McCoy) new comb. is re-figured, and new information provided. A palynological examination of the matrix has been made.

INTRODUCTION.

When Tertiary type fossils in the National Museum of Victoria were being checked, it was noted that a fossil fern named *Lastraea Dargoensis* by McCoy (1878) from the deep leads of the Bogong High Plains was in need of adequate illustration. Plate 1 re-figures the specimen, and the new combination *Cyclosorus Dargoensis* is proposed.

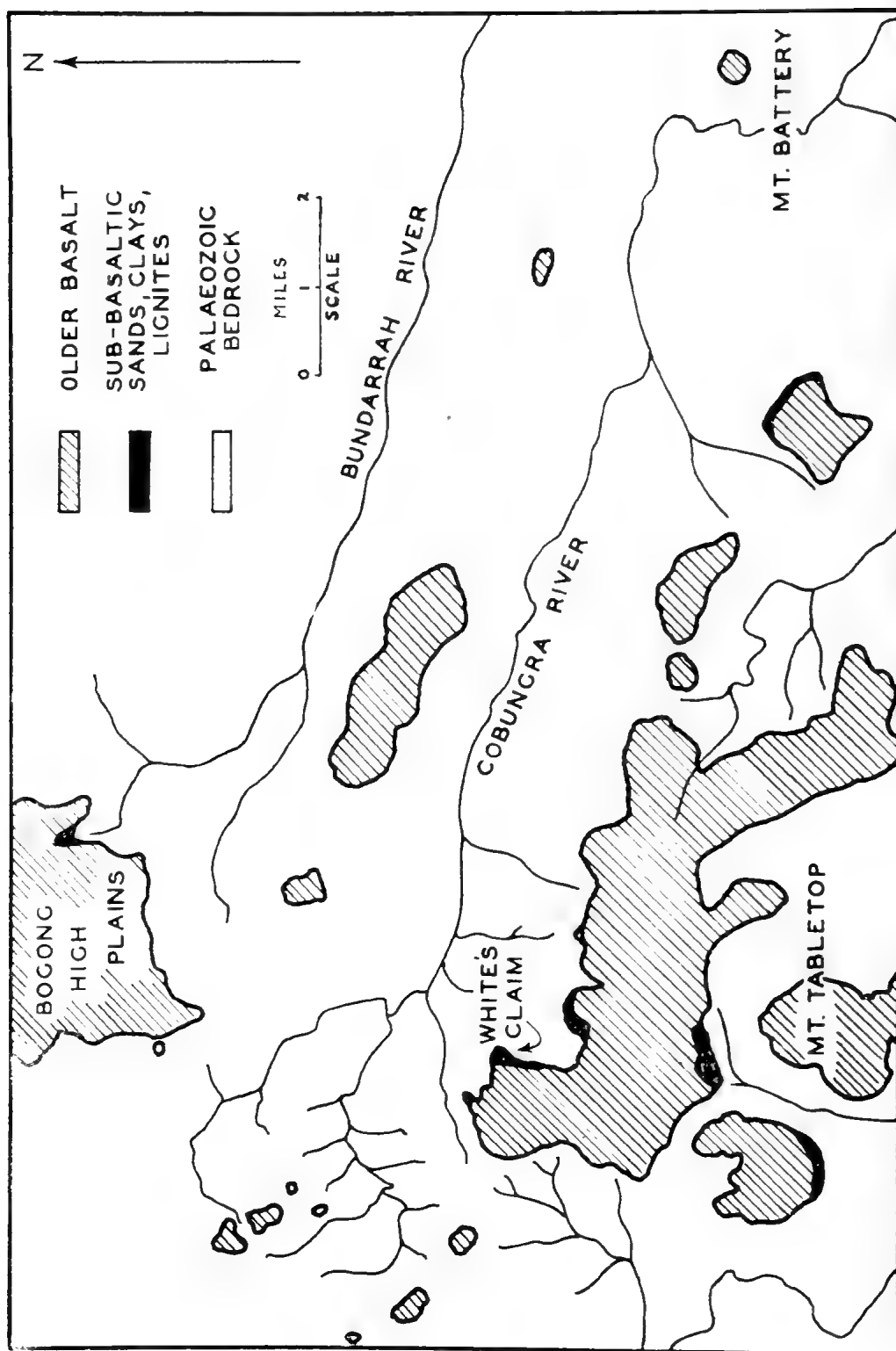
PROVENANCE.

Professor (later Sir) Frederick McCoy in 1878 published determinations of fossil plants obtained from fluviatile and lacustrine deposits under the Older Basalt of the Bogong High Plains. These fossils came from White's goldmining claim on Cobungra Creek at the headwaters of the Bundarra River (Couchman 1878), over 5,000 feet above present sea-level. Hunter (1909) and Kenny (1937*a, b*) have given information on the geology. Brough Smyth (1876) illustrated some of the fossils, while Royce (1887) and Tadgell (1926) have given general information on the area. The geographical position of the site is shown in Figure 1.

From these plant beds McCoy determined "a *Lastraea, L. Dargoensis* (McCoy), allied to a Miocene species from Arctic regions." He thus gave a new specific name, but did not validate it with description or figure. The specimen is in the National Museum of Victoria (P16156), and consists of a brown (oxidized) micaceous siltstone with the fossil plants preserved as carbonaceous films (Plate 1). Hall and Pritchard (1894) refer to this occurrence.

TAXONOMY.

In 1929 Chapman included in his "Open Air Studies in Australia" a photograph (Fig. 60) of the type specimen of *Lastraea Dargoensis*, but it was so diminutive as to be inadequate as a figure. Thus Dr. Duigan (1951) listed it in her "Australian Tertiary Flora" as a "species *Incertae sedis*".



A photograph of the type specimen was sent to Miss Mary D. Tindale of the Botanic Gardens, Sydney, for examination. Mr. R. H. Anderson, the Chief Botanist, has kindly allowed us to use Miss Tindale's findings, which are as follows. "I do not think there is any doubt that it is a species of *Cyclosorus*, a genus of about 300 modern species belonging to the Family Aspidiaceae (if you follow Copeland in his 'Genera Filicum' (1947) 141 or Family Polypodiaceae sub-family Dryopteridoideae according to Christensen in the 'Manual of Pteridology'). *Cyclosorus* and *Lastraea* (or *Thelypteris* as it should now be known) both belong to *Dryopteris sens. lat.* The genus *Cyclosorus* is characterized by pairs of veins united to each excurrent vein between the lobes of the primary pinnae. This type of venation is clearly shown in the photograph. In *Thelypteris* (syn. *Lastraea*) the veins do not join the sinus. Your fossil fern is very similar to *Cyclosorus pennigerus* (Forst.) Copel. which is found in Victoria to-day."

A specimen of *Cyclosorus pennigerus* was kindly forwarded to us from the Botanic Gardens, Sydney, and this is figured in Plate 2, while the enlargement in Plate 1, fig. 2, of McCoy's specimen shows the similarities between the extinct *Cyclosorus Dargoensis* and the extant *Cyclosorus pennigerus*.

DESCRIPTION OF *CYCLOSORUS DARGOENSIS* (McCoy) Gill and McWhae.

Synonym: *Lastraea Dargoensis* McCoy 1878. *Rept. Prog. Geol. Surv. Vict.* pp. 174-176.

Type Specimen: Nat. Mus. Vict. p. 16156. Plate 1, Figs. 1-2. The specimen consists of part of a leaf with pinnae of the order of 4 cm. long carrying about 30 lobes measuring about 5 mm. by 3 mm. Ten lobes occupy approximately 3 cm. on one side of the pinna. Pairs of veins are united to each excurrent vein between the lobes of the pinnae.

PALYNOLOGICAL EXAMINATION.

One of us (K. M. McW.) made preparations from a piece of matrix of the type specimen. As the material was oxidized, the pollen and spore content was low. Numerous monolet spores were obtained and found to agree in size and shape with those of *Cyclosorus* as described by Harris (1955). The spores are free, and anisopolar, bilateral, monolet, laesura long, elliptical in polar view, exine thin (1μ), perine absent, and have equatorial diameters ranging from $30-47\mu$. As the perispore has been lost from these fossils, either through preservation or preparation, a definite connexion with *Cyclosorus* cannot be established. However, the great abundance of monolet spores in the preparations suggest that the spores are probably derived from the fern whose remains are so common in this rock. The living genus, *Cyclosorus*, with which the fossil fern has been compared, possesses monolet spores covered by variously ornamented perispores. It is realised that there are spores of other fern genera which without the thin perispore could look like the fossil

spores just described. The palynological evidence is in keeping with the macroscopic identification but cannot demonstrate absolute relationship.

The following sporomorphs were also found with the spores:

- | | |
|----------------|--|
| Coniferae | <i>Dacrydiumites Florinii</i> Cookson & Pike. |
| | <i>D. Mawsonii</i> (Cookson) Cookson. |
| | <i>Microcachrydites antarcticus</i> Cookson. |
| Fagaceae | <i>Nothofagus</i> species <i>c, e</i> Cookson. |
| Incertae Sedis | <i>Triorites harrisii</i> Couper. |

All the above species are found in beds of similar type and stratigraphical position at Vegetable Creek and in the Snowy Mountains (Gill and Sharp 1957), N.S.W.

GEOLOGICAL AGE.

The Bogong and Dargo High Plains of Victoria extend into New South Wales where in the Snowy Mountains area there are similar deposits of carbonaceous, lacustrine sediments preserved under Older Basalt. These are Lower Tertiary in age, and may be Upper Eocene (Gill and Sharp 1957). It is therefore probable that the deposits at Cobungra Creek containing *Cyclosorus Dargoensis* are of the same geological age.

REFERENCES.

- Brough Smyth, R., 1876.—*Rept. Prog. Geol. Surv. Vict.* pp. 1-112.
 Chapman, F., 1929.—Open air studies in Australia. 8vo. London and Toronto.
 Couchman, T., 1878.—*Rept. Prog. Geol. Surv. Vict.* pp. 1-32.
 Duigan, S. L., 1951.—Australian Tertiary Flora. *Proc. Roy. Soc. Vict.* 63: 41-56.
 Gill, E. D., and Sharp, R. R., 1957.—The Tertiary rocks of the Snowy Mountains, Eastern Australia. *J. Geol. Soc. Aust.* 4: 21-40.
 Hall, T. S., and Pritchard, G. B., 1894.—On the age of certain plant-bearing beds in Victoria. *Rept. A.A.A.S. Mtg.* 1893, pp. 338-343.
 Harris, W. F., 1955.—A manual of the spores of New Zealand Pteridophyta. *Dept. Sci. Ind. Res. New Zealand, Bull.* 116.
 Hunter, S., 1909.—The deep leads of Victoria. *Mem. Geol. Surv. Vict.* 7.
 Kenny, J. P. L., 1937a.—Bogong High Plains proposed reservoir. *Rec. Geol. Surv. Vict.* 5 (4): 429-430.
 Kenny, J. P. L., 1937b.—Cobungra alluvial gold mine. *Rec. Geol. Surv. Vict.* 5 (4): 451-2.
 McCoy, F., 1878.—Schedule of reports on fossil specimens. *Rept. Prog. Geol. Surv. Vict.* pp. 174-176.
 Royce, J. S. H., 1887.—Notes on some localities of Tertiary fossils in Gippsland. *Trans. Geol. Soc. Austr'sia* 1 (2): 31-36.
 Stirling, J., 1887.—Gippsland Mining District, Omeo Division. The Goldfields of Victoria, *Repts. Min. Reg. Qr.* ending 31st December, 1886, pp. 28-32.
 Tadgell, A. J., 1926.—Mount Fainter and beyond. *Vict. Nat.* 43 (2): 32-47.

EXPLANATION OF PLATES.

PLATE 1.

- FIG. 1. Holotype of *Cyclosorus Dargoensis* (McCoy) Gill and McWhae, X2. ?Eocene.
 FIG. 2. *Do.*, in part, X4. Note venation between third and fourth of lower series of primary pinnae.

PLATE 2.

- FIG. 1. *Cyclosorus pennigerus* (Forst.) Copel., living. Specimen from Botanic Gardens, Sydney, greatly enlarged to show characteristic venation.
 FIG. 2. *Do.* lower surface, slightly enlarged.
 FIG. 3. *Do.* upper surface, slightly enlarged.

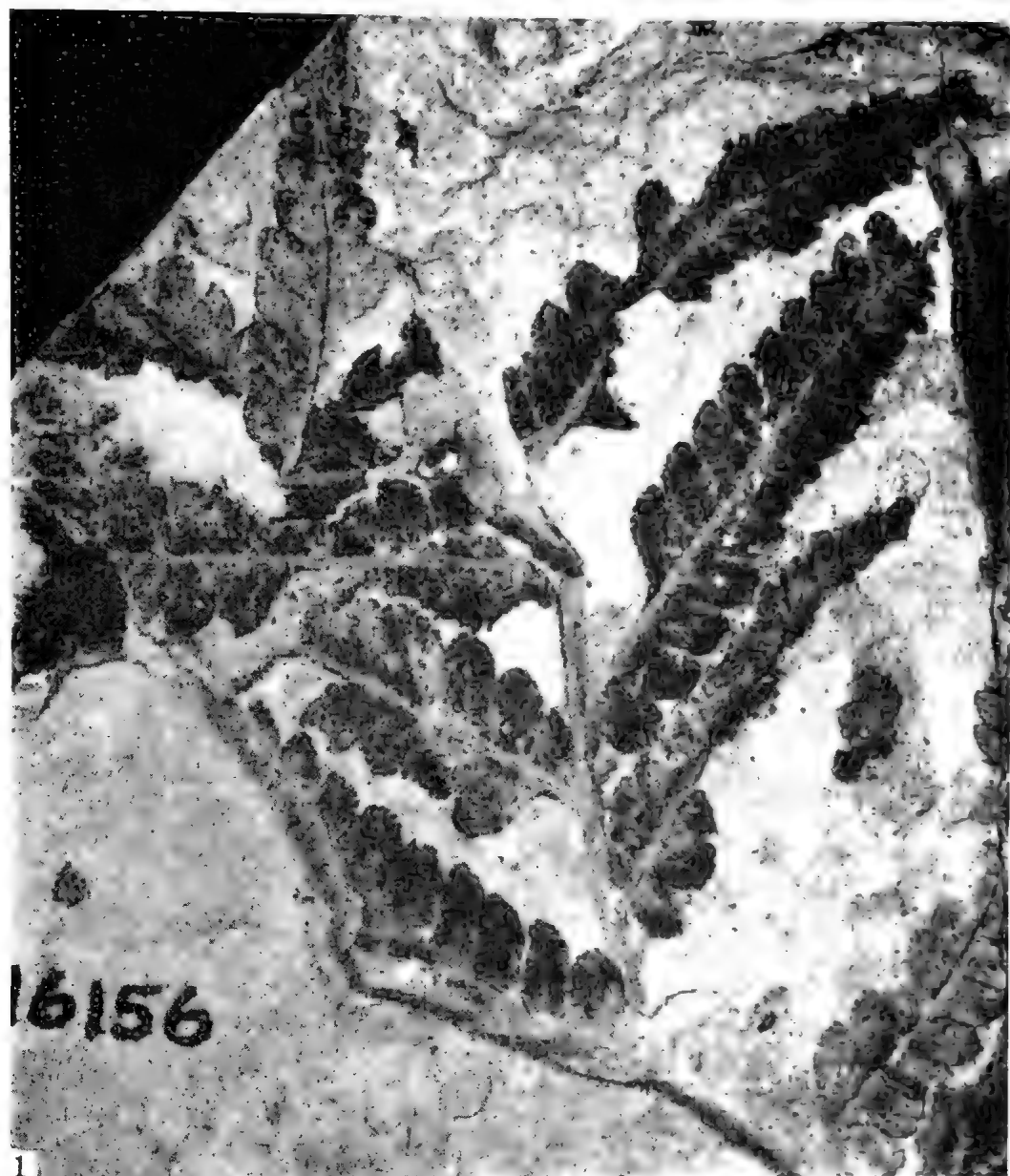


PLATE 1.

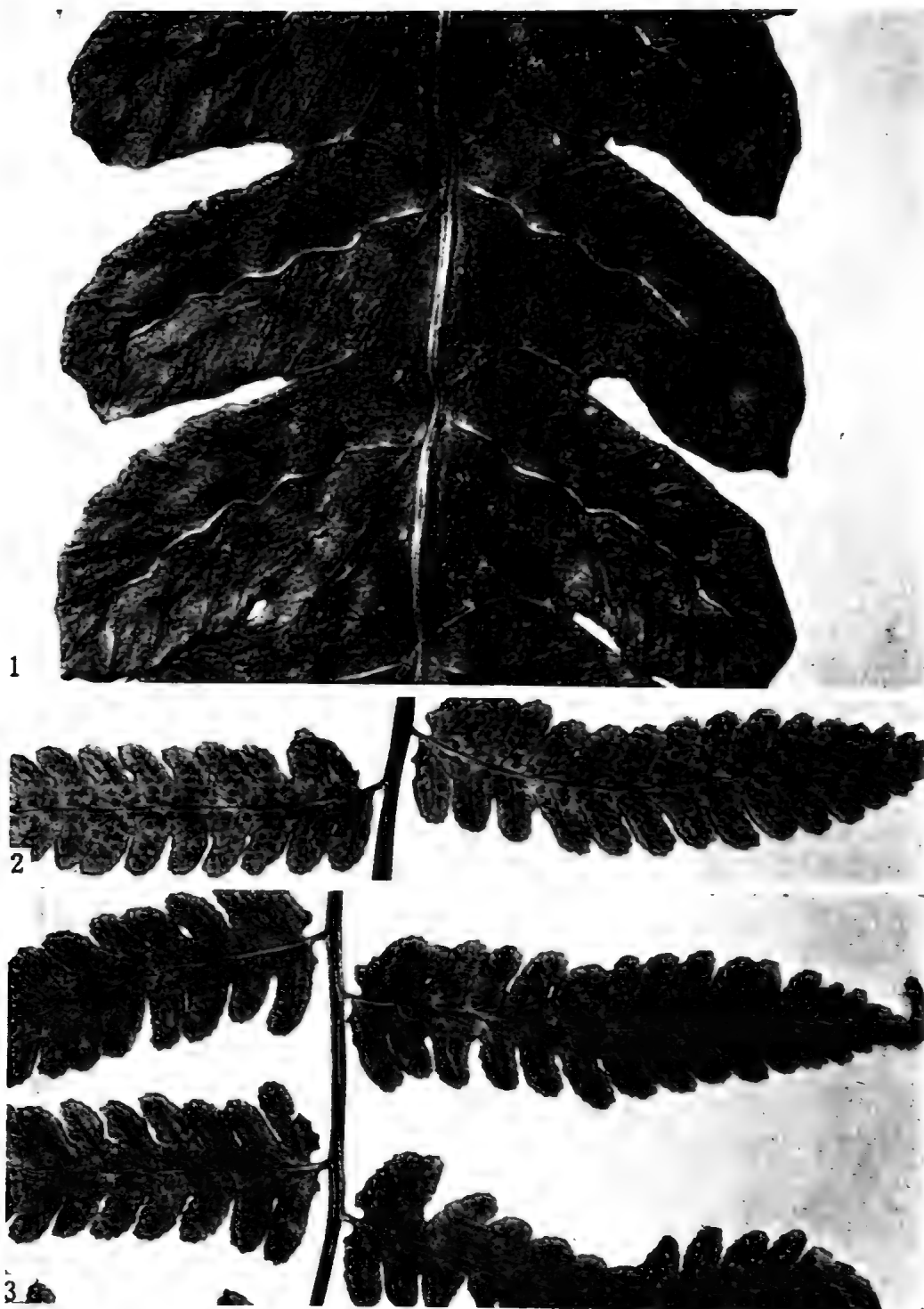


PLATE 2.

NEW GASTEROPODS FROM NORTH AUSTRALIA

By J. Hope Macpherson,

Curator of Molluscs, National Museum of Victoria.

Large numbers of molluscs from collectors all over Australia are submitted to the National Museum for identification; among them are rare shells and, occasionally, undescribed species.

The specimens dealt with below were acquired in this manner and I should like to thank their donors for the generosity which has enabled me to record them and add them to the National Museum collections for use by future workers.

Family MURICIDAE

Murex (Murex) espinosus sp. n.

Plate. Figs. 1, 1A.

Shell of medium size (approximately 60 mm. long) solid, naked except for one or two fine short spines on the posterior end of the canal; whorls seven and a half, strongly convex, three varices on the body whorl; sculpture of spiral cords (8 on body whorl of type) and two or three axial ribs between the varices. The spiral cords tend to fade in the interspaces and strengthen on the axial ribs and varices giving them a nodulose appearance. Colour rose-orange with the rugosities lighter in tone; aperture oval, white; columella callus adhering above but free, thin, and extended below. Outer lip slightly produced and finely crenulate. Siphonal canal of medium length, shorter than the height of the whorls, slightly tapering and with one or two, fine, short spines aligned with the varices around its base. Nuclear whorls one and a half, smooth, rounded, deep rose; the following whorls sculptured with regular, fine, spiral cords and axial ribs; but as the whorls increase the sculpture becomes less regular. The smaller paratype shows traces of a thin, horn coloured periostracum. Operculum deep rose coloured, unguiculate, suboval and strongly sculptured with concentric ridges.

Measurements of type. 60 mm. long, 27 mm. wide.

Specimens examined. Holotype National Museum of Victoria No. F 17960. 2 Paratypes No. F 17960A, locality Tweed Head, New South Wales, dredged in 30 fathoms, presented by Mr. T. Garrard; 1 Paratype in collection of Mrs. N. Jackson, Sydney (measurements 72 mm. long, 37 mm. wide); radula in collection

of National Museum No. F 18865. In collection of Mrs. J. A. Grigg, 3 adults and 1 juvenile trawled Hervey Bay, Queensland; 3 dead shell with hermit crabs taken in fish traps at 60 fathoms off Wooli, Northern New South Wales; 1 specimen trawled in 10 fathoms, Morton Bay, on muddy bottom.

This shell is quite distinct from any other Australian species but shows some affinities with *Murex marcoensis* Sowerby from Florida; it differs in the lack of spines on the varices, and its much finer and less well defined spiral cords.

Family MELONGENIDAE

Pugilina griggiana sp. n.

Plate. Figs. 2, 2A, 2B.

Shell solid, bluntly spindle shaped, whorls 7 or 8, the anal groove forming a keel with above it a flat or slightly convex shoulder extending to the impressed suture. Uneroded shell covered with a thick dull brown periostracum bearing encircling rows of short stiff hairs which are longer on the keel and shoulder. Removal of the periostracum reveals the smooth red-brown shining shell surface sculptured with numerous, fine encircling cords (approximately 40 on the body whorl). Aperture narrow, deep flesh coloured, subquadrate and lengthened into a broad siphonal canal. Outer lip, deep red-brown in colour, thin and crenulated by the encircling cords. Inner lip covered with a thin cream glaze; columella heavy and twisted to usually obscure the umbilical chink. The first two or three adult whorls are faintly axially costate but the remaining whorls are without axial sculpture except for fine growth lines. Operculum unguiculate with an apical nucleus and fine, axial growth lines.

Measurements of type. 102 mm. long, 50 mm. wide.

Specimens examined. Holotype National Museum No. F 17571, 6 Paratypes F 17571A. Locality 10 miles upstream from the mouth of the Port Keats River, Northern Territory, collected by Mrs. E. B. Grigg. Mrs. Grigg collected 40 living specimens among mangroves in solid mud. She also collected a number of *Volegalea wardiana* Iredale, 1938, at two localities, Mindil Beach, near Darwin, living in sand and rock, and at Wallaby Island, north of the Port Keats River, living buried in mud among the mangroves. *V. wardiana* differs from the present species in having strong axial costae on all whorls (particularly on the body whorl) and its encircling cords become obsolete towards the shoulder. The periostracum lacks the encircling lines of hairs

except for two or three rings close to the suture. One of Tryon's figures of *Melongena cochlidium* (Manual Conch. III., plate 43, fig. 227) appears to represent *griggiana*.

The Melongenidae are noted for variation of the axial sculpture within a species. However, because of the distinctive periostracum, a lack of any sign of gradation between *wardiana* and the present species, and in view of the quite distinct habitats of the two, it seems reasonable to consider them as separate species. I have placed this shell in the genus *Pugilina* Schumacher as I cannot see any valid reason for its generic separation from *P. morio* Linne, the type of *Pugilina*. I would also include *V. wardiana* Iredale, thus reducing *Volegalea* to the synonymy of *Pugilina*.

Family FASCIOLARIIDAE

Peristernia aethiops sp. n.

Plate. Fig. 3.

Spindle-shaped, spire approximately same length as mouth; sculptured with strong close-set encircling cords and axial costae (10 on body-whorl); colour red-brown with some cords all white or white on the apex of each costa; mouth mauve, outer lip thin, finely crenulate, interior showing impressions of the costae, inner lip smooth and two faint plaits at the base of the columella which is twisted and reflected to almost close the umbilicus in the type. Anterior canal short, reflected.

Measurements of type. 30 mm. long, 15 mm. wide.

Specimens examined. Holotype National Museum No. F 18466, Paratype in the collection of Mrs. E. B. Grigg, Locality Portland Roads, North Queensland, collected by Mrs. Grigg.

Family OLIVIDAE

Alocospira rosea sp. n.

Plate. Fig. 4.

Shell acuminate, elongate, fusiform, whorls seven including two nuclear; mouth slightly longer than the spire; colour light pink fading to white at the base of the body whorl, sutural band and columella callosity flesh coloured; spire ornamented with five, distinct, encircling cords which commenced above the outer lip; aperture elongate, ovate; outer lip thin; columella twisted; operculum large, thin, horn-coloured.

Measurements of type. 14 mm. long, 9 mm. wide.

Specimens examined. Holotype National Museum No. F 18467; 3 Paratypes No. F 18468; 5 specimens in collection of Mrs. E. B. Grigg. Locality Green Island, Cairns, Queensland, living in weedy sand around low tide mark, seldom taken in the daytime.

Family CONIDAE

Conus rufimaculosus sp. n.

Plate. Figs. 5, 5A, 5B, 5C.

Shell approximately 35 mm. long, light, smooth, strong, conical. Colour white with irregular red-brown splashes which in the type specimens are irregularly tent-like. Periostracum very fine straw-coloured, showing the pattern beneath. Outer lip thin, translucent showing the external colouring; aperture rose pink within, narrow, widening a little towards the anterior. Whorls 8 to 10, the outer edge sharply raised to form a narrow vertical ridge. Spire slightly elevated, canaliculated, the canal forming a notch at the posterior end of the aperture, apex raised and pointed. Sculpture appears to consist only of spiral incised lines on the anterior third of the shell but under the glass a faint tracery of encircling lines and longitudinal growth lines becomes visible. The operculum of the holotype had been lost but it was retained in a specimen lent for comparison by Mrs. N. Jackson and this has been figured. It is thin, horny unguiculate with a bulb-like process on the inner side close to the rounded anterior margin.

Measurements of type. 34 mm. long, 18.4 mm. wide.

Specimens examined. Holotype National Museum No. F 18465; presented by Mr. L. Black; 2 Paratypes No. F 18188, presented by Mr. T. Garrard. Locality Tweed Head, New South Wales, dredged at night in 15-30 fathoms.

In the last few months the National Museum has received for identification from several collectors seven specimens of this shell from the above locality. In addition I have seen three specimens from the collection of Mrs. E. B. Grigg, trawled at 10 fathoms off Jumpin Pin, southern end of Morton Bay, Queensland.

This species corresponds quite well to the description of *Dendroconus* Swainson, 1840, but as a satisfactory subdivision of *Conus* as a group has not yet been carried out, it is better not to adhere to divisions which in many cases are unnatural. Therefore *Conus* sensu lato has been used for this species.

Family VASIDAE

Tudicula rasilistoma Abbott*

Plate. Figs. 6, 6A, 6B, 6C.

Shell solid, heavy, fusiform; whorls 7 to 8 including the protoconch of $1\frac{1}{2}$ smooth rounded whorls, nodulosely keeled, and bearing 7 to 8 rounded axial ribs; spire moderately produced, pyramidal; sutures indistinct, wavy; aperture oval continuous with the narrow siphonal canal, shining smooth, lips pink splashed with brown, interior white. Columella callus well-developed, bearing three spiral plaits below the curve, the central plication being the strongest. Outer lip strong, smooth. Umbilicus shallow, funnel-shaped. Mouth and siphonal canal more than half length of shell. The shell is ornamented with numerous very fine encircling lirae which are crossed at irregular intervals by lines of growth giving the shell a wrinkled appearance. Periostracum grey-brown, felt-like, and persistent; eroded shells are red-brown with two narrow white bands on the keel and one on the canal.

Measurements. Holotype 72 mm. long, 39 mm. wide; Paratype 58 mm. long, 32 mm. wide.

Specimens examined. Holotype National Museum No. F 18189, Paratype No. F 18189A, locality Tweed Head, New South Wales, dredged in 30 fathoms; 2 Paratypes No. F 18761, Tin Can Bay, Queensland (30 fathoms); all presented by Mr. T. Garrard; 2 Paratypes, off Brisbane, Queensland, presented by Mr. L. Black (one National Museum No. F 19866, one sent in exchange to Academy Natural Sciences of Philadelphia, Catalog number A.N.S.P. #227669). A water-worn specimen from Caloundra, Queensland, is in the collection of Mrs. L. Brown.

NEW NAME FOR *MYODORA GABRIELI* MACP.

J. Hope Macpherson.

Myodora gabrieli Macp. was described in Memoirs National Museum Victoria 17, 1951, p. 81, but the name is preoccupied by a fossil *Myodora gabrieli* Chapman and Crespin, 1928, so I propose that it should be replaced by *Myodora latilirata*.

* Since writing the above description, M.S. of which was supplied to Tucker Abbott, Part I. of Indo Pacific Mollusca has been published containing the description, and by priority the authorship of the species must be attributed to him. The TYPE remains in the National Museum of Victoria.

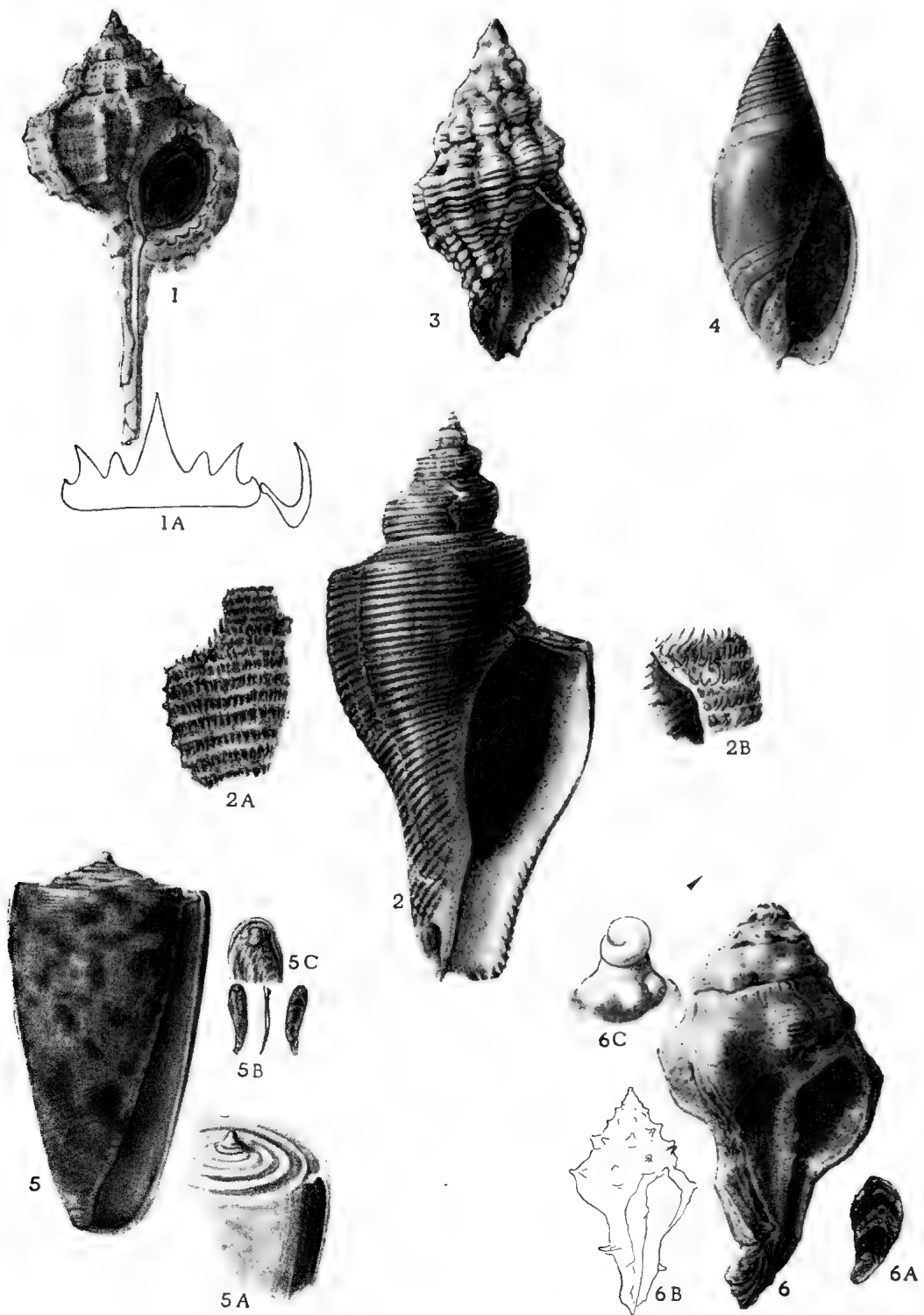


PLATE.

1. *Murex (Murex) espinosus* sp. n., holotype F 17960, x1.
- 1A. Radula (F 18865) of Paratype in collection of Mrs. N. Jackson.
2. *Pugilina griggiana* sp. n., holotype F 17571, x $\frac{3}{4}$.
- 2A. Epidermis on left side of body whole of small Paratype F 17571A.
- 2B. Epidermis on posterior margin of mouth of same shell.
3. *Peristernia aethiops* sp. n., holotype F 18466, x1 $\frac{1}{2}$.
4. *Alocospira rosea* sp. n., holotype F 18467, x2.
5. *Conus rufimaculosus* sp. n., holotype F 18465, x1 $\frac{1}{2}$.
- 5A. Spire of holotype.
- 5B. Operculum of shell in collection of Mrs. N. Jackson.
- 5C. Bulb of operculum x4 $\frac{1}{2}$.
6. *Tudicula rasilistoma* sp. n., holotype F 18189, x $\frac{3}{4}$.
- 6A. Operculum of paratype F 18189A enlarged to proportions of type.
- 6B. Paratype F 18761A.
- 6C. Protoconch of F 18761A enlarged.

BRENTHIDAE OF THE AUSTRALIAN REGION, I.

By Karl E. Schedl, Lienz, Austria.

The National Museum of Victoria, through the Curator of Insects, Mr. A. N. Burns, has sent to me a large number of *Brenthidæ* originating from Australia, the Solomon Islands, New Guinea, and Tasmania. The larger part of the material belongs to the National Museum of Victoria, 34 specimens to the collection of Mr. A. N. Burns, and 17 specimens to Mr. F. E. Wilson.

During the determination I also had the opportunity to go over the collection of the Naturhistorisches Museum at Vienna, finding there some very interesting species. A few specimens were compared with the material in the British Museum by the kindness of Mr. E. B. Britton, other specimens from the British Museum and the Deutsche Entomologische Museum in Berlin were checked by myself.

The larger part of the collection could be named; nine specimens remain for future study. For the known species the locality records are given below; the description of a new species is added.

NEW RECORDS OF KNOWN SPECIES.

*Calodromini**Cyphagogus delicatus* Lea

Gosford, N.S.W. IX.03, H.J.C., 1 sp. (Nat.Mus.Vic.)

Tasmania, without exact locality, 2 sp. (Nat.Mus.Vic.)

Kokoda, Papua, 1200 ft., VII.1933, L. E. Cheesman. (Brit. Mus.)

Cyphagogus diorymerus Lea

Dorrigo, N.S.W., 2 sp. (Nat.Mus.Vic.)

Gosford, N.S.W., Carter, 2 sp. (Nat.Mus.Vic.)

Cyphagogus suspendiosus Lea

Australia, without exact locality, 3 sp. (Nat.Mus.Vic.)

Stratiopisthius doriae Senna

Coen district, Cape York, Qld., H. Hacker, 2 sp. (Nat.Mus. Vic.)

Kokoda, Papua, 1300 ft., IX.1933, L. E. Cheesman. (Brit. Mus.)

*Stereodermini**Jonthocerus ophthalmicus* Pascoe

Mt. Tamborine, Qld., A. M. Lea, 1 sp. (Nat.Mus.Vic.)

Sydney, N.S.W., Carter, trapped by *Pisonia* seed vessel, 1 sp.
(Nat.Mus.Vic.)

Bunya Mts., Qld., Carter, 1 sp. (Nat.Mus.Vic.)

Cerobates australasiae Fairmaire

N.S.Wales, without exact locality, 9 sp. (Nat.Mus.Vic.)

*Trachelizini**Microtrachelizus* (*Trachelizus*) *howitti* Pascoe

Portland, Vic. (Nat.Mus.Vic.)

Morang, Vic. (Nat.Mus.Vic.)

Otford, N.S.W. (Nat.Mus.Vic.)

Ballarat district, Vic., 34 sp. (Nat.Mus.Vic.)

Trachyzelus bisulcatus Fabricius

Cairns, Qld., 7 sp. (Nat.Mus.Vic.)

Coen district, Cape York, Qld., H. Hacker, 2 sp. (Nat.Mus.
Vic.)*Amorphocephalini**Cordus ganglbaueri* SennaTypus, without exact locality, Australia, in Naturh. Museum
Wien.

Lucindale, S.A., F. Secker, 2 ♀ ♀ (Nat.Mus.Vic.)

S. Aust., with following label: *Cordus hospes* Col., by A. M.
Lea 1904, see Proc.roy.Soc.Vict., 1905 : 341, in nest of
ant "*Iridomyrmex nitidus*," pres. Dec. 1904. 2 ♂ ♂ 1 ♀
(Nat.Mus.Vic.)

Ocean Grove, Vic., H. W. Davey, 1 ♀ (Nat.Mus.Vic.)

Lake Hattah, Vic., 16.IV.1919, J. Dixon, 1 ♀ (Nat.Mus.Vic.)

Tallangatta, Vic., 23.III.1913, 1 ♂ (Nat.Mus.Vic.)

Warburton Ra. W.A., II.XI.1949, F. H. Uther Baker, 1 ♂
(Nat.Mus.Vic.)*Cordus hospes* Germar

Killara, Vic., 20.XII.1903, 2 ♂ ♂ 1 ♀ (Nat.Mus.Vic.)

Mackay, Qld., III.1899, 1 ♂ (Nat.Mus.Vic.)

Warrandyte, Vic., 1 ♂ (Nat.Mus.Vic.)

Jeeralang, Vic., 15.XII.1948, A. L. Brown, 1 ♂ (Nat.Mus.
Vic.)

Halls Gap, Vic., 8.XI.1945, A.B. 1 ♂ (Nat.Mus.Vic.)

Hurstville, N.S.W., VI.1953, 3 ♂ ♂ (Nat.Mus.Vic.)

Wandong?, Vic., 2867, 7.XI.1905, 3 ♂ ♂ (Nat.Mus.Vic.)

Warburton, Vic., 16.III.1919, 1 ♂ (Nat.Mus.Vic.)

Australia, Fisch, 1880, McCoy. (Nat.Mus.Vic.)
 Mt. Lofty Ra. S.A., Bernard Gall, 1 ♀ (Nat.Mus.Vic.)
 S. Aust., without exact locality, 2 ♂ ♂ 6 ♀ ♀ (Nat.Mus.Vic.)

Cordus schoenherri Power

Australia, Fisch, (Naturh.Mus.Wien.)
 Australia, McCoy, (Naturh.Mus.Wien.)
 Western Port, Vic., 3 sp. (Nat.Mus.Vic.)
 Mt. Lofty Ra. S.A., Bernard Gall, 1 sp. (Nat.Mus.Vic.)

Kleineella australis Lacordaire

Caboolture, Qld., X.1920, 1 ♂, F. E. Wilson coll.
 Flora R., N. Terr., from Prof. Spencer, collected 7-8/1912,
 1 ♂ (Nat.Mus.Vic.)

Kleineella sulcicollis Pascoe

Damitz, Qld., C. Barrett, 1 ♀, F. E. Wilson coll.
 Flinders Ra., S. Aust., W. K. Graman, 20.X.1897, X. Zinta,
 1 ♀ (Nat.Mus.Vic.)
 Flora R., N. Terr., Prof Spencer, 7.VIII.1912, 1 ♂ 1 ♀
 (Nat.Mus.Vic.)

Arrhenodini

Baryrrhynchus schroederi Kleine

One specimen of this species in the Naturhistorisches Museum Wien originating from "Neu Pommern, Gazellen Halbinsel, Rechingen" determined by Kleine exactly corresponds with the not quite mature male Paratype of *Eupsalis pictipennis* Lea of the National Museum of Victoria, bearing the label "out of log", Claudie R., 12.XI.1913. *Eupsalis pictipennis* has been overlooked in the last edition of the Catalogus Coleopterorum and in the Genera Insectorum by Kleine although the description has been published in the Trans. roy. Soc. S. Aust. 15, 1916 : 367. As we can admit that the determination by Kleine is correct, *Eupsalis pictipennis* Lea (1916) becomes synonymous with *Baryrrhynchus schroederi* Kleine (1914).

Caenorychodes digramma Boisduval

Endeavour R., Qld., 12 ♂ ♂ 6 ♀ ♀ (Nat.Mus.Vic.)
 Cairns, Qld., 1 ♂ (Nat.Mus.Vic.)
 Queensland, without exact locality, 2 ♂ ♂ 3 ♀ ♀ (Nat.Mus.Vic.)
 Cooktown, Qld., C. Olive, 1 ♂ (Nat.Mus.Vic.)
 Innisfail (Geraldton), Qld., 1 ♂ (Nat.Mus.Vic.)

Australia, Müller, 94 (Naturh.Mus.Wien.)
 Melbourne, Vic., French, 1890. (Naturh.Mus.Wien.)
 Andai, Neu Guinea, 1875, coll. Bruijn. (Naturh.Mus.Wien.)

Caenorychodes maasi Kleine

Torokina, Sol. Is., 22.X.1945, R. Clarke, 1 sp. (Burns coll.)

Eupsalis promissa Pascoe

Endeavour R. Qld., S. Lama, 1 ♀ (Nat.Mus.Vic.)
 Cairns, Qld., E. Allen, 1 ♀ (Nat.Mus.Vic.)
 Torres St. N. Aust., 1 ♂ (Nat.Mus.Vic.)
 Cooktown, Qld., Coline, 19.V.1915, 1 ♀ (Nat.Mus.Vic.)
 King R. N., Terr., 6.1.1916, 6 ♂ ♂ 12 ♀ ♀ (Nat.Mus.Vic.)
 Australia, Müller, 1894. (Naturh.Mus.Wien.)
 Australia, Stevens, 1860. (Naturh.Mus.Wien.)
 Somerset, N. Qld., 1.1875, L. M. D'Albertis. (Naturh.Mus. Wien.)
 Isola Yule, Neu Guinea, IV.1875, L. M. D'Albertis. (Naturh. Mus.Wien.)

Belopherini

Ectocemus decemmaculatus Montrouzier

Cairns, Qld., Brown, 1 ♂ 2 ♀ ♀ (Nat.Mus.Vic.)
 Queensland, without exact locality, 5 ♂ ♂ (Nat.Mus.Vic.)
 Endeavour R. Qld., 3 ♂ ♂ 3 ♀ ♀ (Nat.Mus.Vic.)
 Claudie R. Qld., out of old log, 3 ♂ ♂ 3 ♀ ♀ 12.XI.1913, (Nat. Mus.Vic.)
 Torokina, Sol. Is., 23.X., 18.XII.1945, 8 ♂ ♂ 5 ♀ ♀ (A. N. Burns coll.)
 Somerset, Qld., 1.1875, L. M. D'Albertis. (Naturh.Mus. Wien.)
 New Pommern, Gazellen Halbinsel, Rechinger. (Naturh.Mus. Wien.)
 Wokan, Isola Aru, O. Beccari 1873. (Naturh.Mus.Wien.)
 ? Thorey, 1867. (Naturh.Mus.Wien.)
 Ramoi Ging, 79, Nuova Guinea, L. M. D'Albertis. (Naturh. Mus.Wien.)
 New Guinea, coll. Plason. (Naturh.Mus.Wien.)
 Salvatti, New Guinea, 1875, coll. Bruijn. (Naturh.Mus. Wien.)

Elytracantha pogonocerus Montrouzier

Torokina, Sol. Is., 18.XII.1945, R. Clarke, 2 sp.
 Kainanti, N. Guinea, E. W. Wave, 2 sp. (F. E. Wilson Coll.)

*Ithystenini**Diurus forficuloides* n. sp.

Torokina, Sol. Is., 15.XI. and 18.XII.1945, R. Clarke, 2 ♀ ♀
(F. E. Wilson coll.)

Ithystenus curvidens Montrouzier

Kataw, Nuova Guinea, X.1876, L. M. D'Albertis. (Naturh.
Mus.Wien.)

Halmahera, Molucche, 1875, coll. Bruijn. (Naturh.Mus.
Wien.)

Ithystenus hollandiae Boisduval

Endeavour R., Qld., S. Loid, 2 ♂ ♂ (Nat.Mus.Vic.)

Daintree R., Qld., purch. from Mr. Groener, 1 ♂ (Nat.Mus.
Vic.)

Cairns, Qld., 1 ♂ (Nat.Mus.Vic.)

Qld., without exact locality. (Nat.Mus.Vic.)

Cairns, Qld., E. Allen. (Nat.Mus.Vic.)

Kuranda and Townsville, Qld., Jan. 1904, F. P. Dodd. (Nat.
Mus.Vic.)

Claudie R. Qld., 28.1.1914. (Nat.Mus.Vic.)

Torokina, Sol. Is., 18.XII.1945, R. Clarke, 2 ♀ ♀ (A. N. Burns
coll.)

Ithystenus linearis Pascoe

I. Batsch, Stevens, 860. (Naturh.Mus.Wien.)

Ithystenus spinosus Kleine

Neu Pommern, Gazellen Halbinsel, Rechinger. (Naturh.
Mus.Wien.)

Ithystenus wallacei Pascoe

Amboine, 1859, Dr. Doleschal. (Naturh.Mus.Wien.)

Lasiorrhynchus barbicornis Fabricius

New Zealand, Spaeth, 91. (Naturh.Mus.Wien.)

Mesetia amoena Blackburn

Tweed R. N.S.W., X.1921, Lea, 2 ♂ ♂ (Nat.Mus.Vic.)

Dunoon, Richmond R. N.S.W., 2 ♀ ♀ (Nat.Mus.Vic.)

Phoclides collaris Pascoe

Batjan, Molukken 10, (Naturh.Mus.Wien.)

I have also seen a male of *Phoclides bicolor* Guer. det. Kleine
having the same morphological aspect but differing by a
reddish brown colouration on the head, the pronotum,
and the elytral processes. As the specimen named

P. collaris Pascoe, also by Kleine shows remains of such colouration it seems to be doubtful if we have really two different species or a single one *P. bicolor* Guer., varying to some extent in colour according to the stage of maturity.

Pseudoccocephalini

Apterorrhinus compressitarsis Senna

- N. Qld., without exact locality, 2 sp. (Nat.Mus.Vic.)
 Clump Point, N. Qld., 30.IX.1951, J. O. Campbell, 1 sp.
 (F. E. Wilson coll.)
 Dorriggo, N.S.W., R.J.T. 2 sp. (Nat.Mus.Vic.)

Autarcus laticollis Perroud

- Neu Caledonien, 1893, 1 ♂ (Naturh.Mus.Wien.)

Euschizus internatus Pascoe

- Dorriggo, N.S.W., 13 sp. (Nat.Mus.Vic.)

Hormocerus reticulatus Fabricius

- Endeavour R. Qld., C. French's coll., 6.1.1880, 2 ♂ ♂ (Nat.
 Mus.Vic.)
 Cairns, Qld., 3 ♂ ♂ 3 ♀ ♀ (Nat.Mus.Vic.)
 Little Mulgrave R. Qld., H.W.B., 1 ♂ (Nat.Mus.Vic.)
 Rabaul, New Britain, Mars 1953, C. Barrett, 1 ♂ (Nat.Mus.
 Vic.)
 Nova Guinea, 2 ♂ ♂ (Naturh.Mus.Wien.)
 Tebing-tinggi, N.O. Sumatra, Dr. Schultheiss, 2 ♂ ♂ (Naturh.
 Mus.Wien.)

Schizotrachelus dichrous Lacordaire

- Innisfail, (Geraldton) Qld. (Nat.Mus.Vic.)
 Sydney, N.S.W., Carter. (Nat.Mus.Vic.)
 Mt. Tamborine, Qld., all together 23 sp. (Nat.Mus.Vic.)

Uropteroides douei Montrouzier

- Pipitz, Neu Caledonien, 1889. (Naturh.Mus.Wien.)

Uropteroides gestroi Senna

- Torokina, Sol. Is., 21,22,30.X., 19.XI., and 18.XII.1945, R.S.
 6 ♂ ♂ 7 ♀ ♀ (A. N. Burns Coll.)
 Milne Bay, Papua, XI. 1945, P. C. Ralph, 1 ♀ (F. E. Wilson
 Coll.)
 Neu Pommern, Gazellen Halbinsel, Rechinger. (Naturh.
 Mus.Wien.)

Description of a New Species.

Diurus forficuloides n. sp.

Female: Entirely opaque, piceus with yellowish scales, about 20 mm. long, about as slender as *Mesetia amoena* Blackb.

Prorostrum very short, about one-third of the length of the cylindrical metarostrum, mesorostrum feebly developed, swollen, and divided by a longitudinal sulcus dorsally, mandibles very small, prorostrum nearly polished, metarostrum covered with numerous coarse granules, eyes prominent, vertex short, about as long as the prorostrum, and with similar sculpture as the metarostrum, finely sulcate between the eyes.

Antennae with the first segment clavate, the second distinctly shorter and cylindrical, segments 3-6 cylindrical, becoming gradually shorter and covered with sparsely placed long and inclined dark bristles, segments 7 and 8 shorter again, densely covered with pale yellowish scales, 9 to 11 equal in length, pubescence finer, more dense and shorter.

Pronotum cylindrical behind, conical in front, roughly sculptured, with a series of pale yellowish scales on each side of the median line.

Elytra very slender, the sides parallel nearly to the apex, cylindrical, postero-lateral angles drawn out to short pointed projections, declivity very short, obliquely convex; disc striate-punctate, the striae punctures deep, each puncture giving rise to a small yellow scale-like hair, the scales of the third striae somewhat larger and stouter, those of the fourth striae much larger again and nearly circular in outline; some more of such scales in the lower part of the declivity.

Holotype in the National Museum of Victoria, paratype in collection Schedl.

Locality: Torokina, Solomon Islands, 15.XI. and 18.XII. 1945, R. Clarke, ex. coll. A. N. Burns and F. E. Wilson.

AUSTRALIAN BARK AND TIMBER BEETLES.

By Karl E. Schedl, Lienz, Austria.

155, CONTRIBUTION TO THE MORPHOLOGY AND TAXONOMY OF THE SCOLYTOIDEA.

Among a lot of Australian Brentidae I received also seventeen Scolytidae and Platypodidae from the National Museum of Victoria, and nine specimens from the collection of Mr. F. E. Wilson.

In spite of the small number of specimens, this collection contains seven species of Scolytidae, and three species of Platypodidae, including one new. The locality records given below are quite interesting.

NEW RECORDS.

Scolytidae.

Acacicis abundans Lea

Black Rock, Vic., J. E. Dixon, 1 ♂ (Nat.Mus.Vic.)

Pachycotes australis Schedl

Sydney, N.S.W., 20.VIII.1924, ex. Hoop Pine, W. W. Froggatt, 1 sp. (Nat.Mus.Vic.)

Stephanoderes darwinensis Schedl

Darwin, N. Terr., G. F. Hill, 2 sp. (Nat. Mus.Vic.)

Xyleborus solidus Eichhoff

New South Wales, without exact locality, 3 ♀ ♀ (Nat.Mus. Vic.)

Xyleborus pseudosolidus Schedl

Queensland, from Mr. Search, II.1887, 3 ♀ ♀ (Nat.Mus.Vic.)

Xyleborus compressus Lea

Victorian Alps, Vic., C. French coll., 6.I.1908, 3 ♀ ♀ (Nat. Mus.Vic.)

Xyleborus pseudoangustatus Schedl

Cannington, W. A., R. P. McMillan, 3 ♀ ♀ (F. E. Wilson coll.)

Platypodidae

Diapus 5-spinatus Chapuis

Mt. Lamington, Papua, C. T. McNamara, 1 ♀ (F. E. Wilson coll.)

Platypus subgranosus Schedl

Australia, without exact locality, 3 sp. (Nat.Mus.Vic.)

Platypus hastulifer n. sp.

Male: Reddish-brown, 3.9 mm. long, 3.6 times as long as wide. A very distinct new species nearly allied to *Platypus severini* Blandf. but much smaller, the pronotum more coarsely punctured, the punctuation of the elytral interstices more distinct, the elytral processes trifid.

Front: Flat, subopaque, very densely but shallowly punctured, pubescence very short and inconspicuous.

Pronotum: Feebly longer than wide, rather densely covered with punctures varying in size, coarser and more numerous behind, femoral emarginations moderately deep.

Elytra: Feebly wider (32:30) and more than twice as long as the pronotum, with the sides subparallel on the basal half, gradually incurved and then drawn out into two slender processes very similar to those of *Platypus severini* Blandf. from Japan; disc regularly and rather finely striate punctate, the strial punctures rather densely placed, the interstices wide, each one with a not quite regular row of punctures being little finer than those of the striae; declivity gently convex, the striae gradually fading out, the interstitial punctures bearing short erect yellowish bristles; the apical processes trifid, the sculpture fine, semirugose, the short hairs more densely placed.

Holotype and one paratype in coll. F. E. Wilson, two paratypes in collection Schedl.

Locality: Crocodile Is., and Millingimbi, N. Aust., C. Barrett.

AUSTRALITES FROM KANAGULK, TELANGATUK EAST AND TOOLONDO, WESTERN VICTORIA.

By George Baker, D.Sc.

ABSTRACT.

The weights, specific gravity values, dimensions, radii of curvature of posterior and anterior surfaces, and intercepts of the radical line upon the polar axis, have been determined for 48 round and elongated australites with typical button-, lens-, core-, oval-, boat-, dumbbell- and teardrop-shapes from Kanagulk (Lat. $37^{\circ} 8' S.$ and Long. $141^{\circ} 50' E.$), and nearby localities at Telangatuk East and Mt. Talbot, Toolondo, vicinity of Harrow in Western Victoria. Refractive indices and specific refractivities have been determined for 24 of these australites, so selected as to represent the several shape groups and to cover variations in specific gravity within and between the shape groups. The frequency distribution of the specific gravity values, the relationships between weight of particular shapes and their respective specific gravity values, and the relationships between (i) depth and diameter of round forms, and (ii) radii of curvature of posterior and anterior surfaces shown by means of scatter diagrams, reveal no abnormalities among these australites. The results accord with the recently advanced theory that, allowing for tertiary processes of erosion (etching and abrasion) while resting upon the earth's surface, the shapes of australites as found, are secondary shapes, developed from a few typical, small primary shapes (spheres, spheroids, ellipsoids, dumbbells and apoids) by ablation and fusion stripping during ultrasupersonic airflow over their forwardly directed surfaces, whilst travelling earthwards, without rotation, at high speeds through the atmosphere.

INTRODUCTION.

Three collections of australites totalling 34 specimens from Kanagulk, one collection of five australites from Mt. Talbot, Toolondo, and a collection of nine australites from Telangatuk East, have been studied from the aspects of their shape, size, radii of curvature of back (Rb) and front (Rf) surfaces, specific gravity and refractive index values, and their specific refractivities. All of these localities are near Harrow in the Western District of Victoria.

The three collections from Kanagulk and the one from Mt. Talbot, Toolondo, were submitted for examination by four separate owners, per courtesy of the National Museum of Victoria, Melbourne.

LOCATION AND MODE OF OCCURRENCE.

Kanagulk lies on Lat. $37^{\circ} 8' S.$ and Long. $141^{\circ} 50' E.$, some 35 miles south-south-west of Horsham, and 13 miles almost due east of Harrow, Western District of Victoria. Telangatuk East is approximately 8 miles north-east of Kanagulk, and Mt. Talbot is 6 miles north-east of Telangatuk East.

The specimens constituting the collection from Kanagulk, are herein numbered 1 to 34 for convenience of reference (see Tables 2 and 8; those from Telangatuk East are numbered 35 to 43, and those from Mt. Talbot, Toolondo, 44 to 48.

Among the Kanagulk specimens, numbers 1 to 12 were collected on cultivated land by Mr. R. T. P. Elliott over the past twenty years. Numbers 13 to 15 came from uncultivated areas, and were collected by Mr. A. C. Bennett during the past four or five years. Numbers 16 to 34 were collected by Mr. W. R. Jasper, all within a radius of 1 mile of his homestead on the property of "Foster", Kanagulk, Parish of Telangatuk; only four of these were found during the past ten years. The Jasper collection originally contained 40 specimens, but many of these were given away, including one large round core measuring $2\frac{1}{2}$ to 3 inches across. Prior to 1910, these australites were known locally as "black diamonds" because they scratched ordinary glass. Information supplied by Mr. W. R. Jasper relating to the field occurrence of the Kanagulk australites, reveals that some were found on the surface of the ground amid surrounding superficial materials consisting largely of magnetic and non-magnetic ferruginous accretionary growths ("buckshot gravel"), resting upon yellow clay. Most, however, were discovered where the surface soil has been cultivated to a depth of 3 inches to 5 inches. Specimens 13 to 15, and most of those numbered 16 to 34, came from an area of 5 or 6 acres in allotment 84, adjoining allotment 83A, and the remainder were found in allotments 64 and 87, Parish of Telangatuk.

Numerous enquiries in reference to australites, made throughout the district by Mr. Jasper, have not revealed the existence of other collections, apart from one or two specimens. A resident some 10 miles north-west of "Foster" reported finding a button-shaped australite complete with circumferential flange, in clay 15 feet below the surface in a well; this specimen could have fallen down from the surface during construction of the well, or from its sides subsequently. The largest specimen noted in the Kanagulk district, is stated to be a round australite core some $2\frac{1}{2}$ inches in diameter, found 5 miles north-west of "Foster", but the specimen was not submitted for examination.

The largest complete form among the 48 specimens examined, is an oval-shaped australite core (No. 16, Table 2), weighing 39.13 grams, measuring 36 mm. long, 30 mm. wide, and 27 mm. thick, and having a specific gravity value of 2.426. In contrast, the smallest complete specimen in the collection is an oval-shaped australite (No. 7, Table 2), weighing 0.792 grams, measuring 11 mm. long, 9 mm. wide, and 5.5 mm. thick, and with a specific gravity value of 2.408.

The specimens from Telangatuk East (Nos. 35 to 43, Table 2), are registered as numbers 3,418 to 3,426 in the Rock and Mineral Collection of the Melbourne University Geology Department. They are all complete or nearly complete forms, the maximum and minimum weights of which, fall well within the range of weights of the Kanagulk specimens; the same applies to the five australites from Mt. Talbot, Toolondo (Nos. 44 to 48, Table 2), which were submitted for examination by Mr. L. Officer.

On many of the Kanagulk australites, adventitious ferruginous clay had become firmly cemented into some of the bubble pits and into the more deeply etched grooves on several specimens, also into the gap region between circumferential flange and body portion of most of the flanged australites. This is a secondary product of terrestrial origin, and in no way to be connected with australite origin. Prior to weight and specific gravity determinations, it was necessary to remove this clay by boiling in concentrated hydrochloric acid and scrubbing. This treatment had no perceptible effect upon the australite glass itself, as checked by weighing a clean specimen before and after immersion for two hours in boiling HCl, after which time, no change in weight could be detected.

NATURE OF THE AUSTRALITES.

Eighty-five per cent. of the 34 Kanagulk australites are complete or nearly complete forms, while the remainder are relatively large fragments all of which provide sufficient evidence of the original shape type from which they were broken. The nature of these fragments points to natural fracture rather than working by aboriginal man. Sixty-six per cent. of the complete or nearly complete forms have round shapes (i.e., are circular in plan aspect, although lenticular in side aspect). The remainder are elongated (oval-, boat-, dumbbell-, and teardrop-shaped in plan, mainly lenticular in side aspect). If the five fragments are introduced into the comparisons of the proportions of round to

elongated australites in the Kanagulk collections, the percentage of round forms is reduced to 62. The various shape types represented from the three localities, are listed in Table 2.

All of the Telangatuk East and the Mt. Talbot, Toolondo australites are complete or nearly complete forms, although the Mt. Talbot specimens are generally much more weathered (etched and somewhat abraded).

Fourteen of the total of 48 australites reveal flow ridges still in a good state of preservation on their anterior surfaces. Most of these are round forms of australites (ten button-shaped and two lens-shaped forms). Of the two elongated forms showing flow ridges, one is a small oval-shaped australite, and the other teardrop-shaped with one concentric ridge on the bulbous end, and four ridges extending across the anterior surface in arcuate fashion from side to side of the constricted end.

The proportions of the three different types of flow ridges represented, are listed in Table 1.

TABLE 1.—PROPORTIONS OF FLOW RIDGE TYPES.

Nature of flow ridges									Percentage
Concentric	..	..	..	..	..	..	..	..	57
Clockwise spiral	..	..	..	..	..	..	..	..	14
Counterclockwise spiral	..	..	..	..	..	..	..	..	29
									100

Specimens without flow ridges are (a) the larger australite cores, and (b) some of the button- and lens-shaped forms which have been strongly etched and partially abraded, so that the original flow ridge structures have been more or less removed.

For comparison with the percentages of the types listed in Table 1, flow ridges displayed by 100 australites from the Nirranda Strewnfield, 105 miles distant to the south-east (Baker, 1956), occur in the following proportions—46 per cent. concentric, 27 per cent. clockwise spiral, and 27 per cent. counterclockwise spiral.

The shapes and sculpture patterns of the majority of the australites from Kanagulk, Telangatuk East, and Mt. Talbot, are generally comparable with those of many other well-preserved australites described from other parts of Western Victoria (see Baker, 1937, 1940a, 1940b, 1944, 1946, 1950, 1955a, 1955b, and 1956). Two in particular, however, are worthy of more detailed description in being somewhat unusual (Specimens Nos. 2 and 19,

Table 2). One of these (No. 2) is the largest round australite core which the author has so far observed to possess remnants of a flange. The specimen was produced from a sphere of australite glass having an original diameter of approximately 4.5 cms. as obtained graphically from determination of the radius of curvature of the posterior surface, which is a remnant of the primary surface. Such a sphere would have weighed about 175 grams, assuming its specific gravity to have been the same (2.412) as that of the ultimately produced secondary form—a round core resulting from ablation of the original sphere while traversing the earth's atmosphere at ultrasupersonic velocity. Approximately five-sixths by weight of the original sphere was ablated away in this manner, leaving a secondary form weighing 31.599 grams and measuring 32 mm. in diameter, and 22 mm. in thickness. The second specimen (No. 19) is a dumbbell fragment which has lost one of its bulbous ends as a result of relatively recent fracture, and reveals some extraordinary features. An unusually long, relatively smooth, attenuated waist region is preserved and reveals well-developed longitudinal flow lines. This is attached to the remaining bulbous end in such a way as to recall the appearance of attachment of the stalk to the head of a mushroom. The bulbous end shows a complex pattern of "crinkled" flow ridges, and is almost circular in cross-sectional aspect, having only lost approximately one-fourteenth part of its original diameter (20 mm.) by ablation.

MEASUREMENTS OF THE AUSTRALITES.

The weights, specific gravity values, dimensions, radii of curvature (R_B = back surface, R_F = front surface*), and intercepts made by the diameter (= radical line) upon the depth line (= polar axis), are shown in Table 2 for the individual specimens. ON represents the distance to the back pole, and OM the distance to the front pole from the central point in the plane containing the diameter line.

The specific gravity values were obtained by weighing in air and in distilled water ($T^\circ C. = 15.5$), on an air-damped chemical balance.

For purposes of comparison with forms that have lost their flanges, the diameter, width and length measurements of specimens with attached flange or flange remnants, were made across the body portion of each form, so that all such measurements are ex-flange. Width and depth measurements of Specimen No. 42.

*The front or anterior surface was directed earthwards during downward atmospheric flight.

AUSTRALITES FROM KANAGULK, TELANGATUK EAST AND
 TOOLONDO, WESTERN VICTORIA

TABLE 2.

No.	Shape Type	Weight (gms.)	Specific Gravity	Diameter (mm.)	Depth (mm.)	Flange Width (mm.)	Width (mm.)	Length (mm.)	R _B (mm.)	R _F (mm.)	ON (mm.)	OM (mm.)
KANAGULK.												
<i>R. T. P. Elliott Collection.</i>												
1	Button (with flange band)	3.860	2.405	19	9	..	..	..	12.5	11.5	4	5
2	Round Core (with flange remnant)	31.599	2.412	32	22	..	..	..	21.5	20	10	12
3	Hollow Round-Form Fragment	8.668	2.400	25.5	31	..	..	..	21.5	16.5	4	27
4	Boat Core ..	5.445	2.415	..	12	..	16	23	26	21	5	7
5	Button (with flange remnant) ..	2.285	2.398	14	8	3	..	..	8	9	4.5	3.5
6	Oval (flat) ..	1.467	2.417	..	4	..	14	16	20.5	11.5	2	2
7	Oval (small) ..	0.792	2.408	..	5.5	..	9	11	7	7	2.5	3
8	Button (with flange remnants)	2.140	2.404	13	8	3	..	..	7.5	8	4.5	3.5
9	Boat Fragment (with attached flange)	3.234	2.380	..	10.5	2.5	17	..	8.5	10.5	7	3.5
10	Oval Core ..	1.981	2.415	..	10	..	12	14	9.5	7	3.5	6.5
11	Core Fragment ..	1.996	2.416	..	10.5	..	15	..	14.5	10	3.5	7
12	Boat Core ..	17.974	2.383	..	16	..	19	51	11.5	9.5	5	11
<i>A. C. Bennett Collection.</i>												
13	Oval Core	18.218	2.396	26	19	..	..	..	14.5	18.5	7	12
14	Button (with flange remnants)	3.680	2.413	16	10.5	3	..	..	10	9.5	5.5	5
15	Button Fragment (with flange band)	3.775	2.383	..	17.5	..	..	..	15	11	5.5	12
<i>W. R. Jasper Collection.</i>												
16	Oval Core (large)	39.133	2.426	..	27	..	30	36	23.5	23.5	13.5	13.5
17	Boat Core ..	22.305	2.441	..	16	..	19	44	10	10	8	8
18	Boat Core ..	12.659	2.414	..	13	..	14	45	9.5	8.5	5	8
19	Dumbbell Fragment ..	14.097	2.386	20	18.5	..	..	..	10	10	10	10
20	Boat Core ..	8.904	2.406	..	14	..	17	28.5	15.5	10	3.5	10.5
21	Round Core ..	25.580	2.390	31	22	..	..	..	19.5	18	10	12
22	"Aerial Bomb" ..	16.700	2.391	21	..	..	..	30	10.5	10.5	10.5	10.5
23	Round Core ..	19.463	2.394	27	20	..	..	..	17.5	16	9	11
24	Round Core ..	15.713	2.403	28	16	..	..	..	20	15.5	6	10

TABLE 2—continued.

No.	Shape Type	Weight (gms.)	Specific Gravity	Diameter (mm.)	Depth (mm.)	Flange Width (mm.)	Width (mm.)	Length (mm.)	R _B (mm.)	R _F (mm.)	ON (mm.)	OM (mm.)
KANAGULK—continued.												
<i>W. R. Jasper Collection—continued.</i>												
25	Button (with flange remnants)	5.971	2.406	19	13	5	..	..	11.5	12	7	6
26	Button (with flange remnant)	3.562	2.404	18	8	3	..	..	10.5	12.5	4.5	3.5
27	Button (with flange remnant)	4.406	2.390	18	9.5	3	..	..	10.5	11	5	4.5
28	Button (with flange band)	3.400	2.408	18	10	..	..	..	10	10.5	5.5	4.5
29	Button	3.982	2.403	18	10.5	..	..	..	11	10.5	5.5	5
30	Button (with minute flange rem- nant)	2.225	2.394	15	8	..	..	..	8.5	10	4.5	3.5
31	Lens	1.691	2.399	15	7	..	..	..	9.5	10	3.5	3.5
32	Lens	1.678	2.404	14.5	6.5	..	..	..	9.5	10	3.5	3
33	Lens	1.427	2.410	13.5	6.5	..	..	..	9.5	9.5	3.5	3
34	Lens	1.538	2.416	13	7	..	..	..	7.5	8	4	3
TELANGATUK EAST.												
<i>Melbourne University Collection.</i>												
35	Oval Core ..	12.686	2.429	..	19	..	21	27	17	11	10.5	8.5
36	Oval Core ..	13.204	2.437	..	15.5	..	22.5	27	16.5	15	9.5	6
37	Round Core ..	9.732	2.422	21	15	..	..	..	20	18.5	7	8
38	Round Core ..	8.776	2.397	20	17.5	..	..	..	14	14	9	8.5
39	Button (with flange remnants)	4.681	2.378	19	11	..	..	..	12	12	6	5
40	Lens ..	3.872	2.400	17	10	..	..	..	11	11	5	5
41	Button (with flange band)	1.732	2.401	14	7	..	..	..	10	12.5	4	3
42	Dumbbell ..	2.764	2.408	..	6	..	9.5	29.5	6	5.5	2.5	3.5
43	Teardrop ..	2.785	2.401	..	8.5	..	13.5	22	7	11.5	5.5	3
Mt. TALBOT, TOOLONDO.												
<i>L. Officer Collection.</i>												
44	Lens ..	3.712	2.410	17	11.5	..	..	..	9	10.5	6.5	5
45	Lens ..	2.894	2.424	17.5	8	..	..	..	12	12	4	4
46	Lens ..	3.022	2.414	17	9	..	..	..	11	10.5	4	5
47	Button (with flange band)	3.231	2.409	17	9	..	..	..	10	10.5	4.5	4.5
48	Button (with flange remnants)	1.980	2.392	13	8.5	..	..	..	7.5	9	5	3.5

a dumbbell-shaped form, were determined across the bulbous ends, the waist region of this specimen measuring 8.5 mm. wide and 5 mm. thick. Width and depth measurements of Specimen No. 43 were determined across the widest and thickest portions of the bulbous end.

Radii of curvature values (Rb and Rr), and the intercept values (ON and OM) on the depth line (polar axis), were determined graphically from silhouette tracings magnified 5.5 times. All direct measurements, graphical measurements and calculations of measurements, have been taken to the nearest 0.5 mm. Radius of curvature values for the elongated australites are listed for determinations made across the widths of the specimens, but not along the lengths since the results indicate circular cross sections only for positions normal to the long axes of elongated australites.

The flange bands referred to on Specimens Nos. 1, 15, 28 and 41 (Table 2), mark the former positions of attachment of the circumferential flanges to equatorial edges of the posterior surfaces of the body portions. Their presence provides proof

TABLE 3.

Locality	Number of Specimens	Percentage	Total Weight (gms.)	Range in Weight (gms.)	Average Weight (gms.)	Range in Specific Gravity	Average Specific Gravity
Kanagulk ..	34	70	314.577	0.792 to 39.133	9.252	2.380 to 2.441	2.404
Telangatuk East ..	9	19	60.232	1.732 to 13.204	6.692	2.378 to 2.437	2.408
Mt. Talbot, Toolondo	5	11	14.839	1.980 to 3.712	2.968	2.392 to 2.424	2.410
Totals ..	48	100	389.648	0.792 to 39.133	8.717	2.378 to 2.441	2.405

that the original complete round forms were button-shaped. The vitreous, very little etched character of the surfaces of these flange bands, points to relatively recent fracturing away and loss of the flange structure.

The total weights, range and average weights, and the range and average specific gravity values of the australites from Kanagulk, Telangatuk East and Mt. Talbot, Toolondo, are shown in Table 3.

There is a notable absence from these collections (cf. Table 2) of canoe-shaped australites, aberrant shapes, small forms (such as round discs and oval plates), complete flanges and flange fragments, compared with australites from Port Campbell on the south coast of Western Victoria (Baker, 1937, 1940, 1946, 1955b). The smaller forms of australites have thus evidently been overlooked in the field, or else, being relatively fragile, they may have disintegrated to smaller fragments which would go unnoticed unless specifically searched for.

The averages and ranges in values of these various measurements for the different shape groups represented among the Kanagulk, Telangatuk East and Mt. Talbot, Toolondo australites, are listed in Tables 4, 5 and 6.

TABLE 4.—NUMBERS, WEIGHTS, AND SPECIFIC GRAVITY VALUES.

Shape Types	Number in Each Group	Percentage	Range in Weight (gms.)	Average Weight (gms.)	Range in Specific Gravity	Average Specific Gravity
<i>Round Forms (64.5 per cent.)</i>						
Buttons	14	29	1.732 to 5.971	3.369	2.378 to 2.413	2.400
Lenses	8	16.5	1.427 to 3.872	2.041	2.399 to 2.416	2.406
Round Cores	7	15	8.776 to 31.599	18.869	2.390 to 2.422	2.402
Button Fragment	1	2	..	3.775	..	2.383
Hollow Round-Form Fragment	1	2	..	8.668	..	2.400
<i>Elongated Forms (35.5 per cent.)</i>						
Ovals	2	4.5	0.792 to 1.467	1.130	2.408 to 2.417	2.413
Oval Cores	4	8.5	1.981 to 39.133	16.751	2.415 to 2.437	2.427
Boat Fragment	1	2	..	3.234	..	2.380
Boat Cores	5	10.5	5.445 to 22.305	13.457	2.383 to 2.441	2.412
Dumbbell	1	2	..	2.764	..	2.408
Dumbbell Fragment	1	2	..	14.097	..	2.386
"Aerial Bomb"	1	2	..	16.700	..	2.391
Teardrop	1	2	..	2.785	..	2.401
Core Fragment	1	2	..	1.996	..	2.416
Totals	48	100.0	0.792 to 39.133	8.717	2.378 to 2.441	2.405

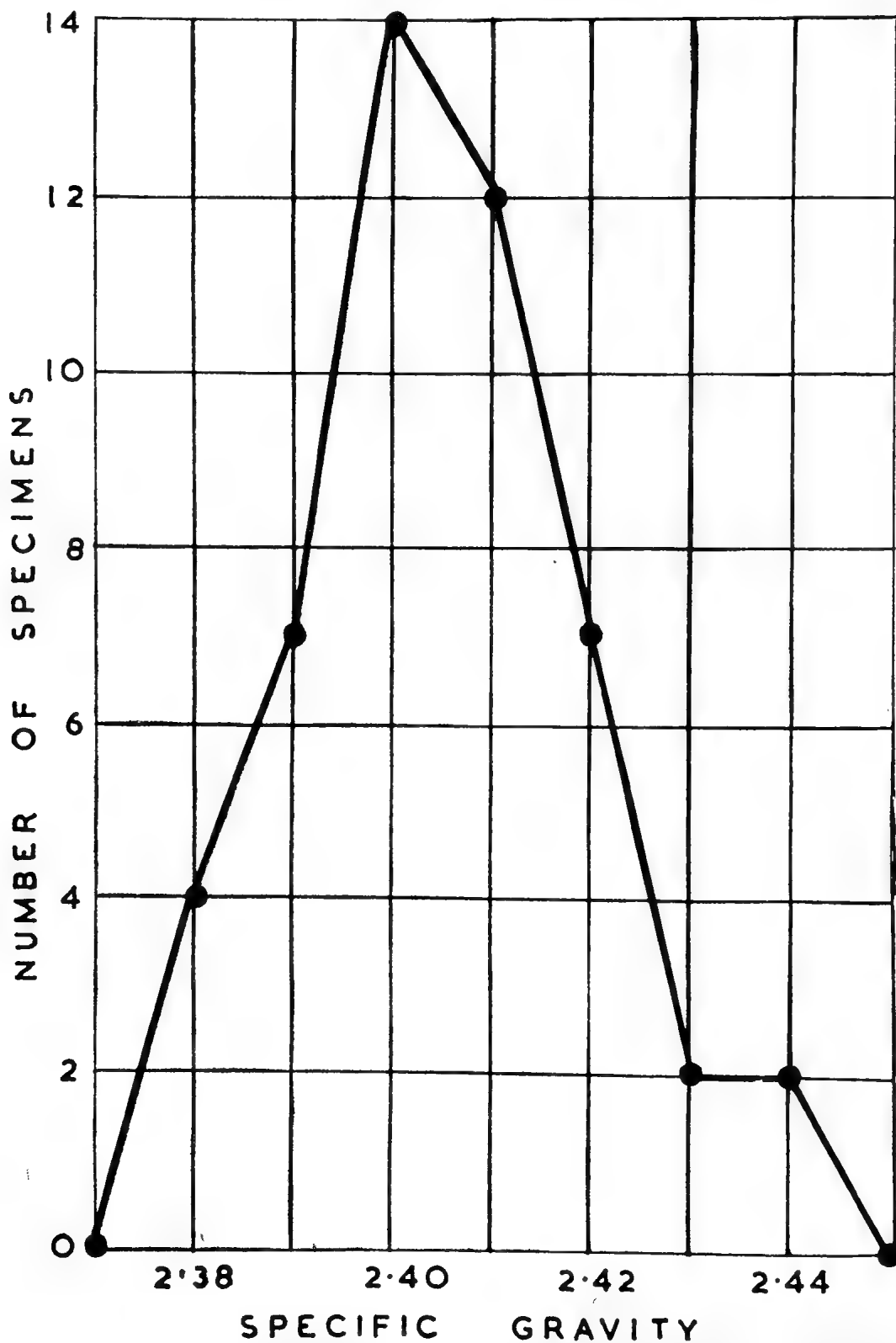


Fig. 1.—Frequency distribution of 48 specific gravity values of australites from Kanagulk (34), Telangatuk East (9), and Mt. Talbot, Toolondo (5).

Relationships between Specific Gravity and Weight.

The frequency distribution of the specific gravity values (taken to the second decimal place), is shown in Figure 1.

The over-all mode of the frequency distribution for the three localities, is 2.40 (Fig. 1), as compared with a calculated average specific gravity of 2.405.

The specific gravity values have been plotted in Figure 2 against the weight values for the 39 complete australites from the three localities.

The scatter diagram (Fig. 2) serves to illustrate that there are both heavier and lighter weight forms in the same and in different shape groups, which have much the same specific

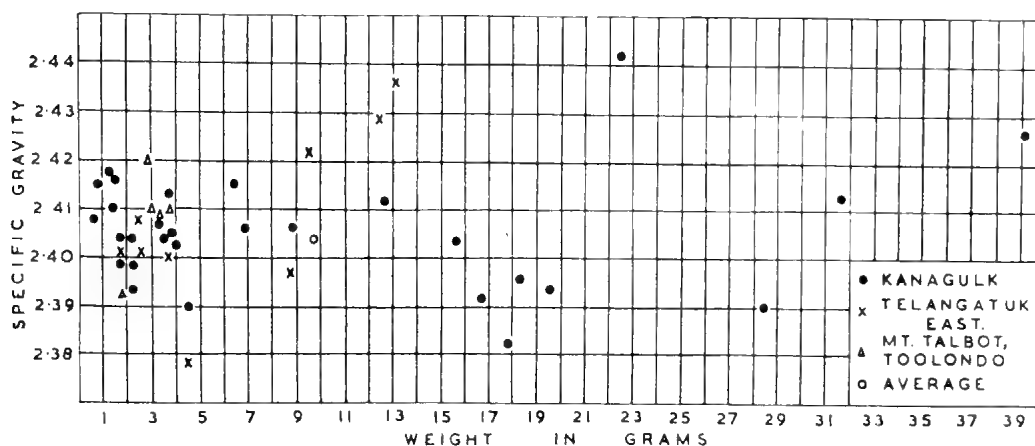


Fig. 2.—Scatter diagram illustrating specific gravity-weight relationships for complete australites from Kanagulk (29), Telangatuk East (9), and Mt. Talbot, Toolondo (5).

gravity, e.g. forms with a specific gravity of 2.41, range in weight from approximately 0.8 to nearly 32 grams. Conversely, a number of individuals in the same or in different shape groups, have approximately the same weight, but reveal a range in specific gravity, e.g. types weighing about 4 grams, vary in specific gravity from 2.378 to 2.415. The average weight of the complete forms plotted in Figure 2, is 8.323 grams, and the average specific gravity is 2.405.

Relationships between Dimensions.

The relationships between depth and diameter values of 30 round forms of australites represented among the specimens from Kanagulk, Telangatuk East and Mt. Talbot, Toolondo, are shown by the scatter diagram, Figure 3.

The scatter diagram (Fig. 3) reveals that diameter is greater than depth for each specimen (hollow round form excepted—cf. Table 2, No. 3). The ratios between diameter and

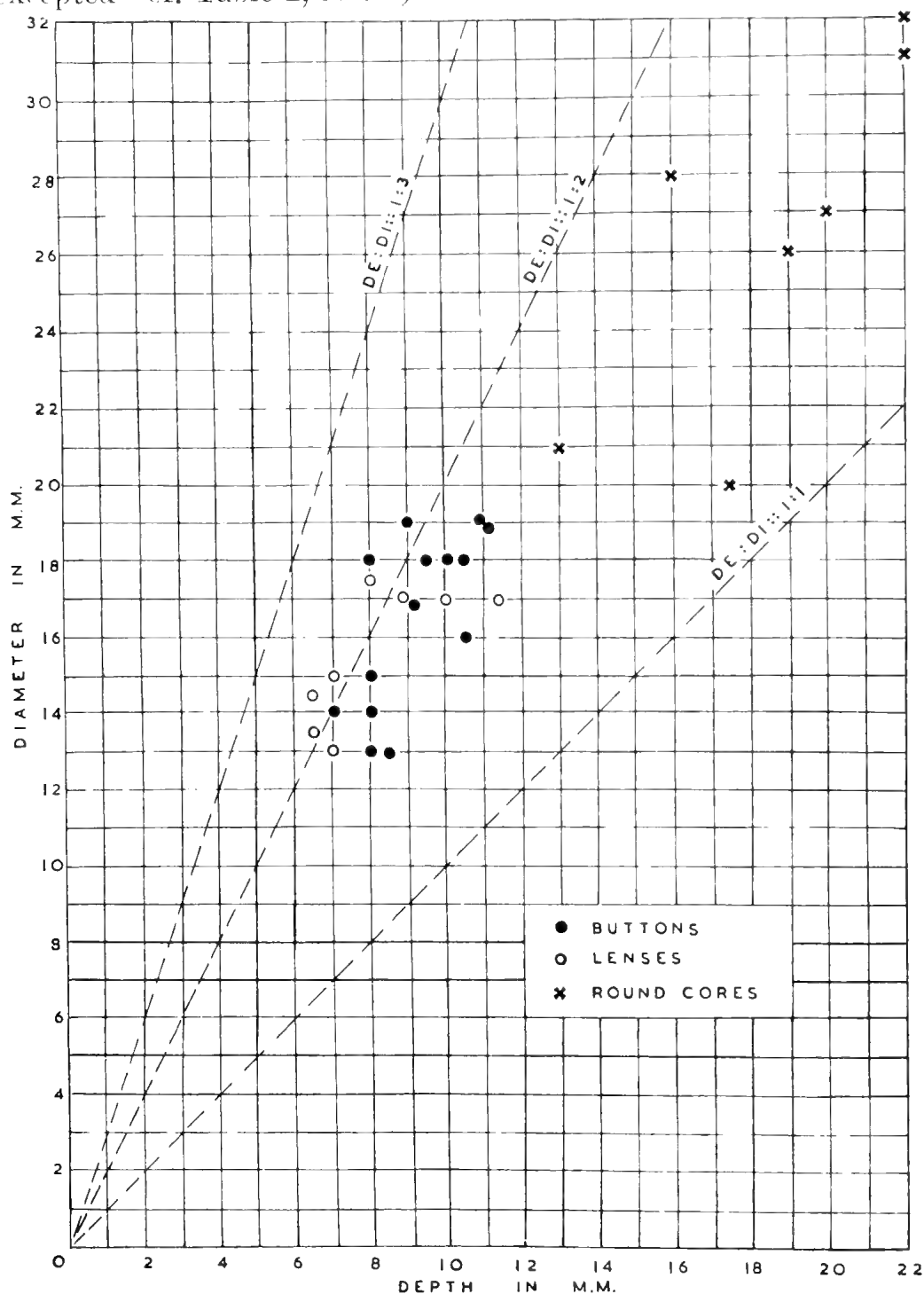


Fig. 3.—Scatter diagram showing relationship of depth and diameter values for round forms of australites from Kanagulk, Telangatuk East and Mt. Talbot, Toolondo.

depth are typically $Di : De :: 1.5 : 1$ to $Di : De :: 2 : 1$. There is a general increase in depth with increase in diameter, but some forms with the same depth, have different diameter values, e.g. 13 to 18 mm. diameter for a depth of 8 mm. Conversely there are other forms with the same diameter which have different depth values, e.g. 8 to 10.5 depth for a diameter of 18 mm. Such relationships are comparable with those of the round forms of australites from Port Campbell, south-western Victoria (Baker, 1955b, Fig. 11, p. 181), and like them, it is apparent that during atmospheric flight, differential ablation of original forms of the same or of different size, has yielded secondary modified shapes sometimes with the same depth, sometimes with the same diameter.

Relationships between Radii and Arcs of Curvature.

Relationships between the radii of curvature of the posterior (RB) and anterior (RF) surfaces, reveal a typical scatter of values (Fig. 4), generally comparable with those shown for the Port Campbell australites (Baker, 1955b) and for the Nirranda Strewnfield australites (Baker, 1956).

It was determined from the silhouette tracings that each radius of curvature for each australite, is in itself constant for all radial sections taken through the plane containing the polar axis of any individual round forms; this does not apply, however, to the elongated forms of australites, where the only radius of curvature considered herein, is that for sections normal to the long axis.

The distribution of RB and RF values in the scatter diagram (Fig. 4) reveals that RB values are confined to the range 6 mm. to 26 mm., and RF values to the range 5.5 mm. to 23.5 mm. The general trend evident from the scatter diagram (Fig. 4), is one of increasing RF with increased RB, thus indicating that processes of ablation generally followed a steady, regular pattern on forms of different original size. Round forms with the same RB but different RF values, e.g. RF range of 9.5 mm. to 12.5 mm. for a value of 10 mm. for RB, indicate differential ablation of spheres of the same original size (since RB is constant and represents the radius of curvature of the posterior surface, which is a remnant of the primary sphere surface). Round forms with the same RF but different RB values (e.g. RB range of 10.5 mm. to 15 mm. for a value of 11 mm. for RF), indicate differential ablation of spheres of different original size (since the radius of curvature of the primary spheres ranged from 10.5 to 15 mm.).

All values plotted in the scatter diagram (Fig. 4) fall within the range $R_B : R_F :: 2 : 1$ to $R_B : R_F :: 1 : 2$, further indicating that processes of frontal ablation* maintain relatively normal

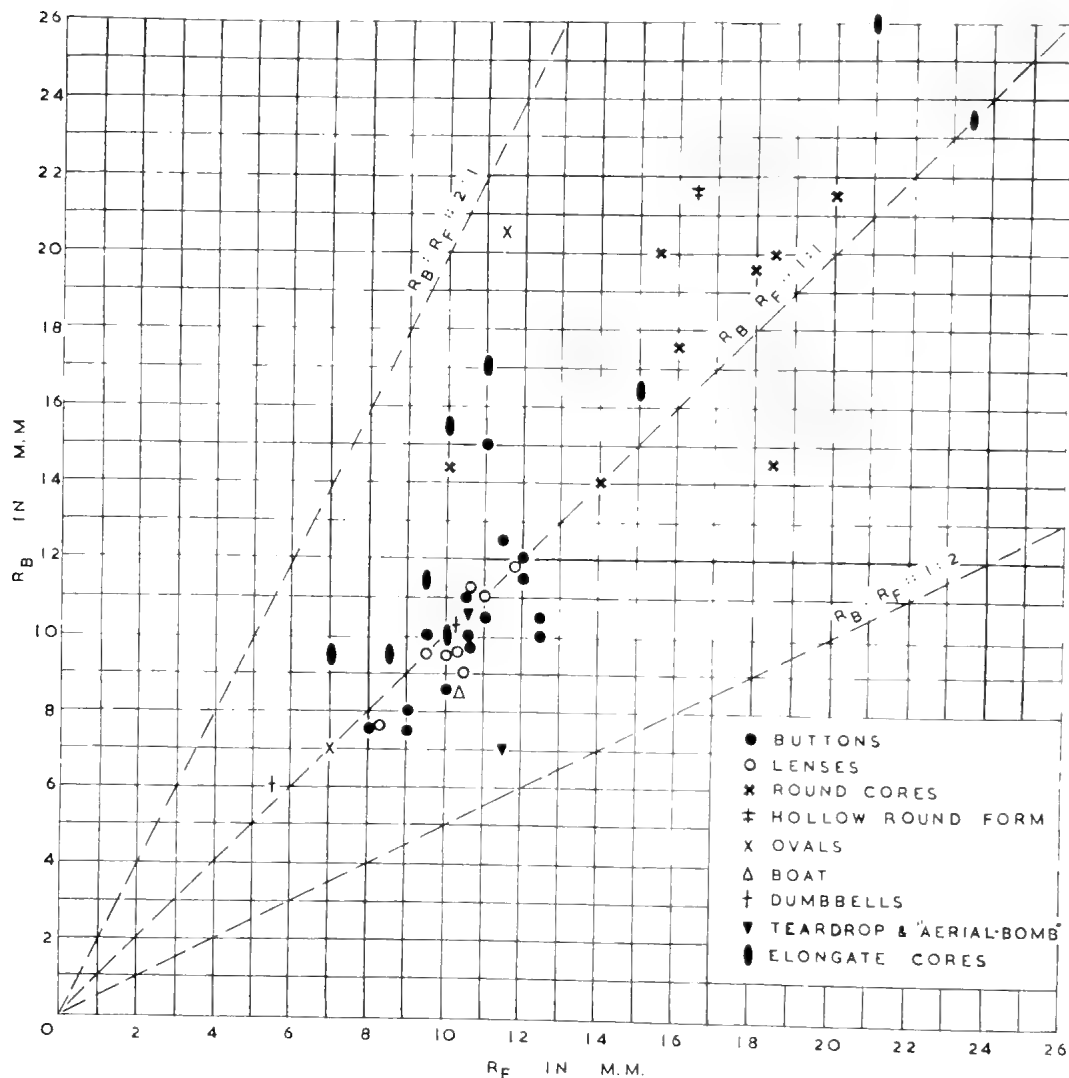


Fig. 4.—Scatter diagram showing relationships of R_B and R_F values of australites from Kanagulk, Telangatuk East and Mt. Talbot, Toolondo. (R_B and R_F = radii of curvature of posterior and anterior surfaces of the australites.)

arcs of curvature upon the diminishing anterior surfaces of australites; only forms that become ablated to 1 to 2 mm. in thickness ultimately become more or less flat and thus have infinite arcs and radii of curvature.

* The phenomenon of frontal ablation (and associated phenomena) arises from and is controlled largely by the effects of ultrasupersonic airflow at the high speeds of flight of australites downwards through the atmosphere (see Baker, 1956).

For the round forms, which constitute 64·5 per cent. of the australites examined, 37·5 per cent. have greater values for R_b than for R_f , and 50 per cent. of the forms in this group consist of the larger round cores; steeper curvatures are thus developed on the front surfaces by ablation. In 15·5 per cent., R_b and R_f are equal in amount, and in this group, 60 per cent. of the forms are lenses; since similar curvatures are maintained by ablation, the ultimate secondary forms are perfectly lenticular. In 47 per cent., R_b is less than R_f , and 66·5 per cent. of the forms in this group are flanged buttons; flatter curvatures are thus developed on the front surfaces by ablation. It is thus seen that on the larger round forms (round cores), ablation produces steeper arcs of curvature on front surfaces. As the forms become reduced in size on further ablation, the arcs of curvature tend to become flatter on the front surfaces (button-shaped australites); with further decrease in thickness, ablation processes produce slightly steeper arcs of curvature of front surfaces, which in the larger proportion of the lenses, become the same as that of posterior surfaces. The final stage is one where the smaller of the lens-shaped forms pass by continued ablation to the thin disc-shaped australites.

Relationships between Intercepts.

The relationships of the intercepts ON and OM (see Baker, 1956) cut off on the depth line (polar axis) by the diameter line (radical line), show trends which are comparable with and governed by the relationships between the radii of curvature of the posterior and anterior surfaces of the australites. Examples in which the value of OM is greater than that of ON , are made up of 64 per cent. core-shaped forms, 18 per cent. button-shaped, and the remainder lens-shaped. In these forms, the back pole (N) is thus nearer to the centre of the plane containing the radical line, hence the greater bulk of australite glass is located on the front pole side of the radical line; this is more especially pronounced in the australite cores. Examples with OM and ON equal in value, are comprised of 60 per cent. lens-shaped forms, 20 per cent. button-shaped, and 20 per cent. cores, in which the back (N) and front (M) poles are equally spaced from the radical line and since $R_b = R_f$, such forms tend to be lenticular in side aspect; this applies more particularly to the lens-shaped forms which are largely perfectly lenticular. Examples in which OM is less than ON , consist of 81 per cent. button-shaped forms and 19 per cent. lens-shaped. In them, the front pole (M) is nearest to the centre of the plane containing the radical

TABLE 5.—DIMENSIONS.

Shape Types			Range in Depth	Average Depth	Range in Diameter	Average Diameter	Range in Width	Average Width	Range in Length	Average Length
			(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)
Buttons	..	..	7 to 13	9.5	13 to 19	16.5	..	..	..	..
Lenses	..	..	6 to 10	7.5	13 to 17	14.5	..	..	..	..
Round Cores	..	..	15 to 22	19.0	20 to 32	26.0	..	..	..	..
Button Fragment	..	..	..	..	..	..	..	..	..	..
Hollow Round-Form Fragment	..	..	..	31.0	..	25.5	..	..	..	..
Ovals	..	..	4 to 5.5	4.5	..	..	9 to 14	11.5	11 to 16	13.5
Oval Cores	..	..	10 to 27	18.0	..	..	12 to 30	21.5	14 to 36	26.0
Boat Fragment	..	..	..	11.0	..	..	..	17.0	..	..
Boat Cores	..	..	12 to 16	14.0	..	..	14 to 19	17.0	23 to 51	38.0
Dumbbell	..	..	..	6.0	..	..	..	9.5	..	29.5
Dumbbell Fragment	..	..	..	20.0	..	..	..	20.0	..	..
"Aerial Bomb"	..	..	..	..	..	..	..	21.0	..	30.0
Teardrop	..	..	..	8.5	..	..	..	13.5	..	22.0
Core Fragment	..	..	..	10.5	..	..	..	15.0	..	..
Totals	..	..	4 to 27	12.0	13 to 32	18.5	9 to 30	16.5	11 to 51	29.0

TABLE 6.—RADII OF CURVATURE AND INTERCEPT VALUES.

Shape Types			Range of R _B	Average R _B	Range of R _F	Average R _F	Range of ON	Average ON	Range of OM	Average OM
			(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)
Buttons	..	..	7.5 to 12.5	10.0	8 to 12.5	11.0	3.5 to 7	5.5	3 to 6	4.5
Lenses	..	..	7.5 to 11	9.5	8 to 11	9.5	3.5 to 5	4.0	3 to 5	3.5
Round Cores	..	..	14 to 21.5	18.0	14 to 20	17.0	6 to 10	8.5	8 to 12	10.5
Button Fragment	..	..	..	15.0	..	11.0	..	5.5	..	12.0
Hollow Round-Form Fragment	..	..	..	21.5	..	16.5	..	4.0	..	27.0
Ovals	..	..	7 to 20.5	14.0	7 to 11.5	9.0	2 to 2.5	2.0	2 to 3	2.5
Oval Cores	..	..	9.5 to 23.5	16.5	7 to 23.5	14.0	3.5 to 13.5	9.5	6 to 13.5	8.5
Boat Fragment	..	..	..	8.5	..	10.5	..	7.0	..	3.5
Boat Cores	..	..	9.5 to 26	14.5	8.5 to 21	12.0	3.5 to 8	5.5	7 to 11	9.0
Dumbbell	..	..	..	6.0	..	5.5	..	2.5	..	3.5
Dumbbell Fragment	..	..	..	10.0	..	10.0	..	10.0	..	10.0
"Aerial Bomb"	..	..	..	10.5	..	10.5	..	10.5	..	10.5
Teardrop	..	..	..	7.0	..	11.5	..	5.5	..	3.0
Core Fragment	..	..	..	14.5	..	10.0	..	3.5	..	7.0
Totals	..	..	7 to 26	12.5	7 to 23.5	11.5	2 to 13.5	6.0	2 to 13.5	7.0

line, so that the greater bulk of australite glass is thus situated on the back pole side of the radical line, and this is more pronounced among the button-shaped forms.

Taken in conjunction with R_B-R_F relationships, the intercept relationships are of such a nature as to indicate that among the round forms of australites, there has been greatest volume reduction by frontal ablation of the primary spheres of australite glass which ultimately yielded lens- and button-shaped forms. Such spheres were originally somewhat smaller than the primary spheres from which the australite cores were produced by ablation.

The primary spheres from which the round forms of the Kanagulk, Telangatuk East and Mt. Talbot australites were produced, ranged in diameter from 1.5 to 4.3 cms.; those from which lenses were formed, ranged from 1.5 to 2.2 cms., those from which the button-shaped forms resulted ranged from 1.5 to 2.5 cms., and those which yielded cores, ranged from 2.8 to 4.3 cms.

Comparable modifications of primary forms of revolution such as the spheroid, dumbbell and apicoid, resulted in the variations in R_B-R_F and $ON-OM$ relationships noted for the various elongated forms of australites from the same localities (cf. Table 2).

Comparisons with Other Localities.

The ranges and average values for the weight and specific gravity of the australites from the Kanagulk — Telangatuk East — Mt. Talbot district, are compared in Table 7 with those determined from other localities in the Western District of

TABLE 7.

Concentration Centre	Number of Complete Specimens	Range in Weight of Complete Specimens (gms.)	Average Weight of Complete Specimens (gms.)	Range in Specific Gravity	Average Specific Gravity
Port Campbell ..	212	0.065 to 56.482	2.734	2.33 to 2.47	2.404
Kanagulk ..	29	0.792 to 39.133	9.752	2.380 to 2.441	2.404
Telangatuk East ..	9	1.732 to 13.204	6.692	2.378 to 2.437	2.408
Nirranda — Stanhope's Bay ..	155	0.247 to 55.100	2.560	2.37 to 2.47	2.409
Mt. Talbot, Toolondo ..	5	1.980 to 3.712	2.968	2.392 to 2.424	2.410
Mt. William ..	2	..	..	2.393 to 2.443	2.418
Harrow ..	33	1.230 to 33.780	8.970	2.386 to 2.468	2.420
General range ..	..	0.065 to 56.482	..	2.330 to 2.470	..
General average ..	..	..	3.514	..	2.407

Victoria (cf. Baker, 1955a, 1955b, 1956; Baker and Forster, 1943). Only complete or nearly complete specimens are considered in these comparisons, and only a proportion of the complete australites so far found in the Port Campbell and Nirranda Strewnfields, have been taken into consideration.

There are statistically significant numbers of specimens for comparative purposes from nearly all of the localities shown in Table 7. The general trend is for specimens with higher specific gravity values to occur in the north-west (Harrow) of the distribution region provided by the localities listed, while specimens with the lower specific gravity values occur in the south-east, in the Port Campbell district, some 125 miles south-east of Harrow. For localities relatively close together, however, such a trend is not apparent (e.g. Kanagulk, Telangatuk East and Mt. Talbot) over the short distances involved; moreover, the average specific gravity value (2.405) for these three closely-spaced occurrences, is nearer to that for Port Campbell than for Harrow, even though situated spatially much closer to Harrow. These are relatively minor discrepancies, however, when fitted into the general provincial trend known to occur across 2,000 miles of the Australian Strewnfield as a whole.

REFRACTIVE INDEX AND SPECIFIC REFRACTIVITY.

The refractive index values determined by the Immersion Method, using monochromatic (Na) light for 16 australites from Kanagulk, 3 from Telangatuk East and 5 from Mt. Talbot, Toolondo, are listed in Table 8, together with their respective specific gravity values and the calculated specific refractivity ($k = (n - 1)/d$). These specimens were so chosen as to represent the several shape groups in the collections, and the variations of specific gravity within and between those shape groups. The table is arranged primarily according to shape of australites, and secondarily according to increase in refractive index values among the individuals of each shape group.

There are statistically insufficient numbers of determinations in each separate shape group to warrant the calculation of their average refractive index and specific refractivity values. Table 8 reveals that the specific refractivity is more or less constant for a range in both specific gravity and in refractive index values, which properties show sympathetic variations within each separate shape group, and from shape group to shape group.

The average refractive index and specific gravity values of the smaller number of complete elongated forms determined, are

slightly in excess of the averages for the larger number of round forms, but the average specific refractivity values are much the same.

Since refractive index and specific gravity values of australites are unlikely to have become radically altered, either during flight through the atmosphere of the primary forms undergoing shape modification, or subsequently thereto while the

TABLE 8.

Australite Shape Group				Listed Number of Specimen	n_{Na}	Specific Gravity	K
<i>Round Forms.</i>							
Button (body portion)	..	..	..	15	1.497	2.383	0.2086
Button (body portion)	..	..	..	39	1.498	2.378	0.2094
Button (body portion)	..	..	..	48	1.501	2.392	0.2094
Button (body portion)	..	..	..	47	1.503	2.409	0.2088
Flange from button	..	..	..	25	1.502	2.404	0.2088
Flange from button	..	..	..	26	1.502	2.406	0.2086
Flange from button	..	..	..	27	1.500	2.395	0.2088
Body of same button	..	..	..	27	1.499	2.388	0.2090
Lens	..	..	..	32	1.502	2.404	0.2088
Lens	..	..	..	44	1.503	2.410	0.2087
Lens	..	..	..	46	1.504	2.414	0.2088
Lens	..	..	..	45	1.506	2.424	0.2087
Round Core	..	..	..	23	1.500	2.394	0.2088
Round Core	..	..	..	2	1.504	2.412	0.2088
Hollow Round-Form Fragment	..	..	..	3	1.502	2.400	0.2092
<i>Elongated Forms.</i>							
Oval	..	..	..	7	1.503	2.408	0.2089
Oval Core	..	..	..	16	1.506	2.426	0.2086
Boat Core	..	..	..	12	1.498	2.383	0.2090
Boat Core	..	..	..	4	1.504	2.415	0.2087
Boat Core	..	..	..	17	1.510	2.441	0.2090
Dumbbell Fragment	..	..	..	19	1.498	2.386	0.2087
Dumbbell	..	..	..	42	1.502	2.408	0.2085
"Aerial Bomb"	..	..	..	22	1.501	2.391	0.2095
Teardrop	..	..	..	43	1.502	2.401	0.2091
<i>Summary.</i>							
Averages of all specimens listed in this table				..	1.502	2.403	0.2089
Ranges of all specimens listed in this table				..	1.497 to	2.378 to	0.2085 to
				..	1.510	2.441	0.2095
Averages for round forms				..	1.501	2.401	0.2089
Averages for elongated forms				..	1.503	2.407	0.2090

(The listed numbers of the specimens are the same as those in Table 2.)

ultimate secondarily shaped forms were lying upon the earth's surface, it is evident that the differences and similarities existing among these properties as between members of the same shape group and between the separate shape groups, must primarily be a function of the mode of origin at their extraterrestrial birthplace.

Comparisons with Other Localities.

The ranges and average values of the refractive index, specific gravity and specific refractivity of a proportion of the complete australites from the Kanagulk—Telangatuk East—Mt. Talbot district, are compared in Table 9 with those so far determined from different concentration centres in south-western Victoria. Those listed for Mt. William are from Tilley (1922).

TABLE 9.

Concentration Centre	Number of Determinations	Range in n_{Na}	Average n_{Na}	Range in Specific Gravity	Average Specific Gravity	Range in K	Average K
Loch Ard Gorge, east of Port Campbell ..	1	1.513 to 1.515	..	..	2.427	..	0.2080
Telangatuk East ..	3	1.498 to 1.502	1.501	2.378 to 2.408	2.396	0.2085 to 0.2094	0.2090
Kanagulk	16	1.497 to 1.510	1.502	2.383 to 2.441	2.402	0.2086 to 0.2095	0.2089
Mt. Talbot, Toolondo	5	1.501 to 1.506	1.503	2.392 to 2.424	2.410	0.2087 to 0.2094	0.2089
Harrow	2	1.512 to 1.517	1.514	2.431 to 2.446	2.438	0.2103 to 0.2114	0.2108
Mt. William ..	2	1.504 to 1.520	1.512	2.393 to 2.443	2.418	0.2106 to 0.2128	0.2117
General range ..	..	1.497 to 1.520	..	2.378 to 2.446	..	0.2080 to 0.2128	..
General average ..	..	..	1.504	..	2.406	..	0.2094

n_{Na} —refractive index for sodium light; K—specific refractivity.

(The specific gravity values listed in Table 9, refer to only those australites for which the refractive index has been determined.)

In Table 9, the specific gravity value of the Port Campbell example is well above the average (2.404) for 212 complete specimens from this field, and since refractive index and specific gravity both increase and both decrease proportionately to yield a constant specific refractivity, it is thus expected that the refractive index value shown in Table 9 for this specimen, is also much above the average. The general trend in refractive index variations across the area of comparison, more or less parallels that shown by the specific gravity variations (cf, Table 7).

Specific gravity and refractive index variations reflect variations in the silica content of natural glasses, both properties showing an increase with decreasing silica (Spencer,

1939, p. 430). Inasmuch as specific gravity and refractive index variations mean variations in silica among the individuals of the separate shape groups (Table 8), and also among the shape groups themselves (Table 8), it becomes evident that physical shape and chemical composition of australites are virtually independent of one another. This is even further stressed by more general comparisons of such properties from east to west across the vast australite strewnfield, although the range of variations is not marked between more closely spaced centres of australite concentration (cf. Table 9).

ACKNOWLEDGMENTS.

The author is grateful to Messrs. W. R. Jasper, R. T. P. Elliott and A. C. Bennett of Kanagulk, Western Victoria, and to Mr. L. Officer of Mt. Talbot, Toolondo, Western Victoria, for kindly loaning their australite collections for examination. Mr. E. D. Gill of the National Museum of Victoria (Melbourne) was instrumental in obtaining the specimens for detailed investigation. The australites from Telangatuk East, Western Victoria, were kindly loaned by the Geology Department, University of Melbourne.

REFERENCES.

- Baker, G., 1937.—Tektites from the Sherbrook River district, east of Port Campbell. *Proc. Roy. Soc. Vic.*, vol. 49 (2), pp. 165-177.
- , 1940a.—Some australite structures and their origin. *Min. Mag.*, vol. 25, pp. 487-494.
- , 1940b.—An unusual australite form. *Proc. Roy. Soc. Vic.*, vol. 52 (2), pp. 312-314.
- , 1944.—The flanges of australites. *Mem. Nat. Mus. Vic.*, no. 14 (1), pp. 7-22.
- , 1946.—Some unusual shapes and features of australites (tektites). *Mem. Nat. Mus. Vic.*, no. 14 (2), pp. 47-51.
- , 1950.—Australites, pp. 35-36 of Geology and physiography of the Moonlight Head district, Victoria. *Proc. Roy. Soc. Vic.*, vol. 60.
- , 1955a.—Australites from Harrow, Victoria. *Min. Mag.*, vol. 30, pp. 596-603.
- , 1955b.—Curvature—size relationships of Port Campbell australites, Victoria. *Proc. Roy. Soc. Vic.*, vol. 67 (2), pp. 165-219.
- , 1956.—Nirrandra strewnfield australites, south-east of Warrnambool, Western Victoria. *Mem. Nat. Mus. Vic.*, no. 20, pp. 59-172.
- Baker, G., and Forster, H. C., 1943.—The specific gravity relationships of australites. *Amer. Journ. Sci.*, vol. 241, pp. 377-406.
- Spencer, L. J., 1939.—Tektites and silica glass. *Min. Mag.*, vol. 25, pp. 425-440.
- Tilley, C. E., 1922.—Density, refractivity and composition relations of some natural glasses. *Min. Mag.*, vol. 19, pp. 275-294.

NEW CADDIS FLY GENUS FROM TASMANIA.

(TRICHOPTERA: PLECTROTARSIDAE.)

*By Arturs Neboiss, M.Sc., F.R.E.S., Assistant Curator of Insects,
National Museum of Victoria.*

Summary.

Following the discovery of nine specimens of a Plectrotarsid type caddis-fly from Tasmania it has been necessary to extend some of the family characters of Plectrotarsidae to include *Liapota lavara* gen. et sp. nov. described and figured in this paper. Additional information of the genus *Plectrotarsus* is also included.

Introduction.

Since the description of the type species *Plectrotarsus gravenhorstii* Kolenati in 1848, the correct systematic position of the genus has long been in doubt. First placed in the family Sericostomatidae by Kolenati, and later in Phryganeidae by Banks (1913), the genus *Plectrotarsus*, comprising three species, was finally classified in the monogenetic family Plectrotarsidae erected by Mosely in 1953. Elongated mouth parts were given as a character distinguishing this family from others in the Inaequipalpia division.

The genus *Liapota*, described in this paper, does not possess the above character, but the wing venation and genitalia are an indication of closer association with Plectrotarsidae than with any other family in this division. Summarizing the distinguishing characters in the families with five-segmented maxillary palps in females and fewer segments in those of males, we can separate Sericostomatidae and Philorheithridae* by the absence of ocelli, Phryganeidae by four-segmented maxillary palps in the males, and Limnephilidae by the termination of the radius in the posterior wing.

Family PLECTROTARSIDAE.

Sericostomatidae Kolenati, 1848, Gen. et Spec. Trich. 1:94 (partim).

Phryganeidae Banks, 1913, Trans.Amer.ent.Soc. 39:234 (partim).

Phryganeidae Mosely, 1936, Proc.zool.Soc.Lond. 1936:395.

Plectrotarsidae Mosely, 1953, in Mosely & Kimmins "Trich. Austr. & N. Zeal." :20.

* The latter family is included for reference as the genus *Austrheithrus* Mosely described in this family cuts across the two main divisions, namely Inaequipalpia and Aequipalpia (Mosely & Kimmins 1953, p. 178).

The following are the amended taxonomic characters of the family to include the new genus *Liapota*.

Antennae not exceeding the length of wings, moderately stout to stout, basal segment bulbous. Ocelli always present. Maxillary palpi of the male three-segmented, of the female five-segmented. Mouth parts elongate or normal. Tibiae and tarsi armed with strong spines, tibial spurs varying—1:4:4 or 2:2:4 on the respective genera. Wing venation similar, or differing in the two sexes, according to species. Posterior wing with strong frenular hairs set at the humeral angle, the number is variable according to genus; radius terminates in the first apical sector or ends blindly before reaching the wing margin; discoidal cell very short.

KEY TO GENERA OF THE FAMILY PLECTROTARSIDAE.

Mouth parts elongate; Spurs 1:4:4; Two frenular hairs at the humeral angle of posterior wing *Plectrotarsus* Kol.

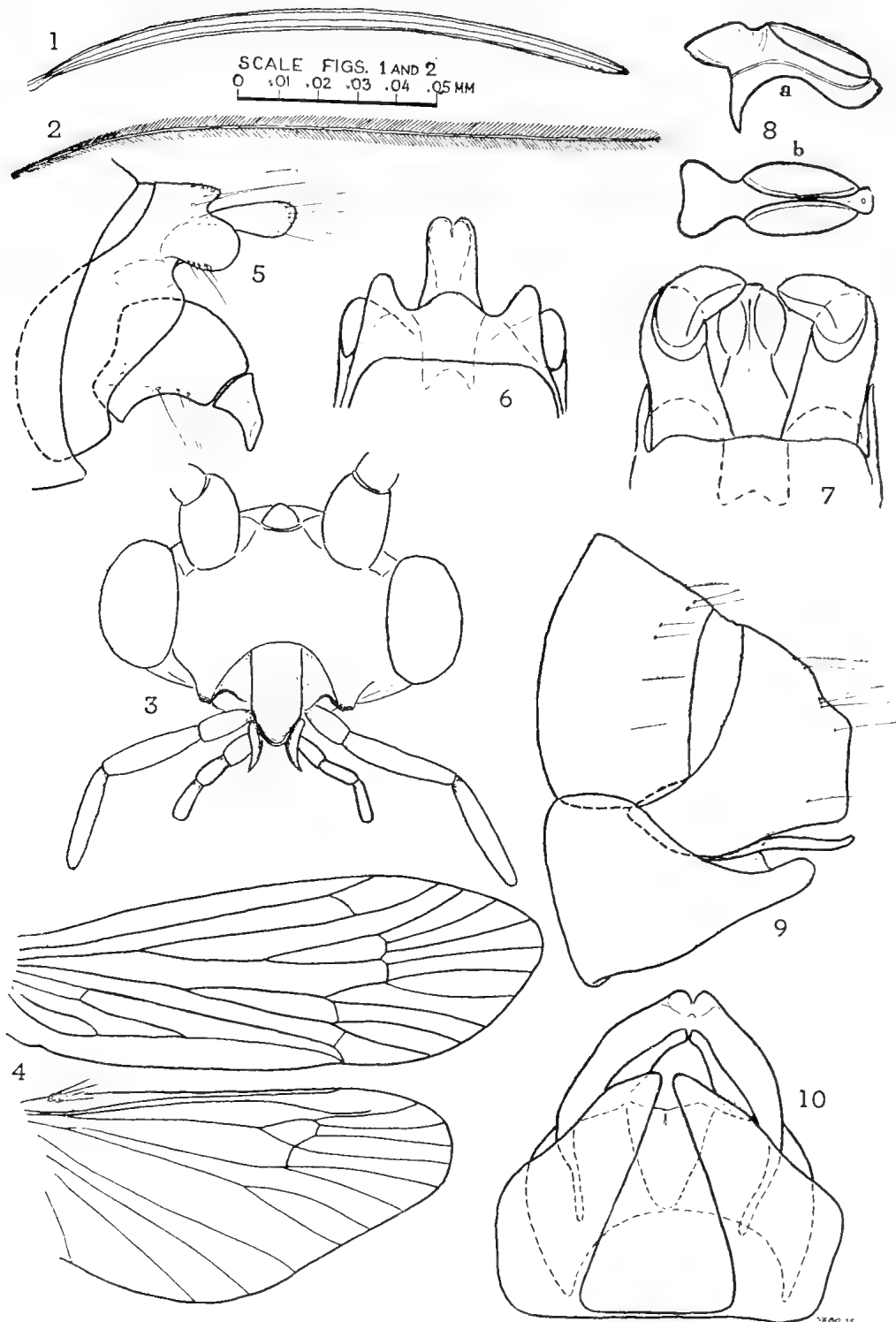
Mouth parts not elongate; Spurs 2:2:4; Four frenular hairs at the humeral angle of posterior wing *Liapota* gen. nov.

GENUS *Plectrotarsus* KOLENATI.

Some additional information on the distribution and morphology of this genus has been accumulated by the present author during the past five years.

Tillyard (1918) in his publication of wing-trichiation states that the wing scales of the genus *Plectrotarsus* "always show three or four striae". Besides this type of scale (Fig. 1) it was found that the anterior wing fringe is formed of feather-like hairs of unequal length (Fig. 2). This type of fringe has been found on specimens of all three *Plectrotarsus* species.

The generic description given by Mosely and Kimmins (1953) p. 21 contains a statement that in the anterior wings "forks nos. 1, 2, 3 and 5 present in the ♂, 1, 2, 3, 4 and 5 in the ♀; all the forks sessile". On comparing this with Figure 6, p. 22 it was noticed that in the anterior wing of the male all forks are sessile as stated in the description, while in the female fork no. 4 is stalked, the footstalk being about equal to the length of the fork. This character is present in the females of *P. gravenhorstii* and *P. tasmanicus* only, whereas in *P. minor* fork no. 4 is wanting. The latter species presents some further differences in the posterior wing venation. Radius is bent downward, merged in the first apical sector, but instead of R1 + 2 being joined to the wing margin, both veins are separated shortly before, thus forming a small additional fork



Figs. 1-2.—*Plectrotarsus gravenhorstii* Kol. : 1, scale from anterior wing; 2, feather like hair from anterior wing fringe.

Figs. 3-10.—*Liapota lavara* gen. et sp. nov.: 3, head from front; 4, ♂ wings; 5, ♂ genitalia lateral; 6, ♂ genitalia dorsal (penis and inferior appendages omitted); 7, ♂ genitalia ventral; 8, penis—(a), lateral; (b), dorsal; 9, ♀ genitalia lateral; 10, ♀ genitalia ventral.

above fork no. 1. This seems to be a somewhat unstable character, and as Mr. Kimmins informed, is present not only in the females, but also in one male paratype and a suggestion of it in another male. It is therefore necessary to amend the generic diagnosis describing the wing venation.

The anterior wings with forks nos. 1, 2, 3 and 5 present in the males; in some species the females possess an additional fork no. 4 which is stalked. In the posterior wing, radius bent strongly downward and merging in the first apical sector, sometimes separated just before reaching wing margin; discoidal cell very small; forks nos. 1, 2 and 5 present in both sexes. Two frenular hairs at the humeral angle of posterior wing.

Plectrotarsus gravenhorstii KOLENATI.

No definite Tasmanian localities are known to the present author. The Australian mainland localities and data are as follows: Victoria 8 specimens Buxton, 15.XII.1955; 2 spec. Tarrawarra, 29.XII.1953; 9 spec. Tarrawarra, 5.I.1954; 12 spec. Mordialloc (no date); 3 spec. Fitzroy River, 26.XII.1952. New South Wales 4 spec. Barrington Tops, Jan. 1925.

The above localities show that this species is comparatively widely distributed. All Victorian localities are in the vicinity of deep, rather slowly flowing rivers, and wide, partially swampy river flats which are often subject to flooding. No such detailed information on the New South Wales locality is available.

Plectrotarsus tasmanicus MOSELY.

The distribution recorded by Mosely (1936) is extended to King Island (Bass Strait) some 50 miles north-west of Tasmania by specimens (3♂ 7♀) collected by J. A. Kershaw, January 1907, and now in the National Museum of Victoria collection.

Plectrotarsus minor MOSELY.

This species is known only from a small area on the extreme south of Western Australia. Besides the type locality, Albany, a single female specimen has been taken 10 miles East of Nornalup, W.A. 17.xi.1958 by E. F. Riek, this specimen was available for the present study (CSIRO collection).

Anterior wings in both sexes similar, with fork no. 4 wanting. Posterior wings with radius bent downward, merging in the first apical sector, but sometimes both veins again separated before the wing margin, thus forming an additional fork above fork no. 1. This latter character is found in all known females, and also in two male specimens.

GENUS *Liapota*, GEN. NOV.

Type species *Liapota lavara*, sp. nov.

Spurs 2:2:4. Antennae stout, basal segment large, second short, third and the following ones slightly longer than the second. Ocelli present. Maxillary palpi of the male three-segmented; first segment short, second about two and half times the length of the first, third slightly shorter than second. Maxillary palpi of the female five-segmented, proportional lengths of the first three segments as in the male, fourth and fifth segments each about the same length as third. Mouth parts not elongated. Wings densely covered with yellow and white pubescence. The anterior wing discoidal cell is moderately long and narrow; cellula thyridii slightly longer than discoidal cell; forks nos. 1, 2, 3 and 5 present in both sexes, all sessile. In the posterior wing the discoidal cell is very short; radius bent downward, for a short distance running close and parallel to R₂, and finally ending blindly before reaching the apex of the wing; forks nos. 1, 2 and 5 present. Four frenular hairs set at the humeral angle.

The generic name is derived from a Tasmanian aboriginal word "liapota," meaning "creek".

Liapota lavara, sp. nov.

(Figs. 3-10).

Head black, covered with white decumbent hairs; sparse, pale yellowish and erect ones along the posterior ridge. Antennae stout, dark brown. Frons and palpi yellowish brown, the former densely covered with golden yellow hairs, except for a patch of dark brown near the base of antennae; the pubescence on palpaes is short, yellow and decumbent. Thorax dark brown; legs yellowish brown, densely clothed with yellow pubescence, spines dark brown, spurs yellow. Anterior wings covered with dense golden yellow pubescence; pattern of white pubescence forming narrow cross lines which are bordered with brown. Posterior wings concolorous yellowish brown.

Genitalia ♂ —Although basically of the same pattern as that in the genus *Plectrotarsus* it is quite distinct. Superior appendages short and rounded. Upper penis cover elongate, hood-shaped, with the apex excised at centre. Penis short, bent and widened laterally. Inferior appendages two segmented; basal segment wide, bent strongly downward; second segment short, with distinct ventrolateral ridge, apex pointed.

Genitalia ♀—Ventrally terminates in a pair of somewhat triangular lobes which are connected by a rather transparent membrane. Dorsal plate flattened and excised at the apex, with a pair of finger-like processes just below it. A small ventral process is on the sixth sternite.

Length of the anterior wing, 5.5–6 mm.

Type material.—Holotype ♂ : Cradle Mtn. Tas.; allotype ♀ : Wilmont, Tas.; 7 paratypes: 2 ♂ 1 ♀ Wilmont, Tas.; 2 ♂ 1 ♀ Cradle Mtn., Tas.; 1 ♂ Strahan, Tas. All specimens were collected by H. J. Carter and A. M. Lea. Holotype, allotype and five paratypes all in the South Australian Museum; two paratypes (♂ ♀) in the National Museum of Victoria (presented by the South Australian Museum). One paratype ♂ from Cradle Mtn. (SAM) is dissected and mounted as a microscope preparation. *Distribution*—North-West Tasmania.

The trivial name is derived from a Tasmanian aboriginal word meaning "little".

ACKNOWLEDGMENTS.

The author expresses most sincere thanks to Mr. G. F. Gross, of the South Australian Museum, Adelaide; Mr. E. F. Riek, Division of Entomology, C.S.I.R.O., Canberra; Mr. D. E. Kimmins, British Museum (Natural History), London, and to Mr. A. McEvey of the National Museum of Victoria, Melbourne, for loan of the very interesting material, and their valuable criticism.

REFERENCES.

- Banks, N. (1913).—Trans. Amer. ent. Soc., 39: 234.
Kolenati, F.A. (1848).—"Gen. et Spec. Trich.", 1: 94.
Mosely, M. E. (1936).—Proc. Zool. Soc., Lond. 1936: 395.
Mosely, M. E. and Kimmins, D. E. (1953).—"Trich. Austr. & N. Zeal.": 20.
Tillyard, R. J. (1918).—Proc. Linn. Soc., N.S.W. 43: 647.

A NEW SPECIES OF THE *CYPRAEA* SUBGENUS *NOTOCYPRAEA*.

By *R. J. Griffiths.*

Specimens of *Cypraeidae* collected in the area of Western Port Bay, Victoria, Australia, differ from specimens of the known species of the family. The differences are so considerable and consistent that it is clear that the new specimens belong to a hitherto undescribed species.

Family CYPRAEIDAE.

Cypraea (Notocypraea) wilkinsi sp. n.

Holotype. Shell ovate, with a broad anterior end, labial side callous, shell otherwise thin, and light in weight; spire protruding slightly above the top of its pit. Dorsum bright flesh in colour, sides and ends paler, base tending to be white, especially on the columellar side; no dorsal bands. On the labial callus there are about forty very small pale brown spots, with ten or so more or less in a line on the opposite side of the shell. Aperture fairly wide throughout, constricted towards the front on the labial side. Basal teeth small, on the columellar side not extending onto the base. Fossula shallow, crossed by extensions of the teeth; its lower edge projects only slightly into the aperture; the shallow columellar sulcus merges with the fossula. Interior of the shell pale flesh in colour.

Animal. Tentacles pale orange, darker at ends; tapering in shape, with rounded tips. Siphon pale cream, almost translucent, with no papillae at the edge. Mantle translucent, colourless or very pale orange, almost invisible when extended over the shell; marked on the left with about twenty patches composed of dark dots; mantle papillae unbranched, mamilliform, with tips rounded; about twenty such papillae on each side. Foot very pale cream, also almost translucent, with some raised tubercles on the sides; it extends behind and on both sides of the shell when the animal crawls.

Radula. The radula is sketched in Figure 1.

× 150



Fig. 1.—1 central, 2 lateral, 3 first marginal, 4 second marginal.

The radula, which is 8 mm. long and 0.4 mm. wide, has 70 rows of teeth.

Juvenile shell. A single dead specimen of a juvenile (oliviform) shell was found under the same stone as the holotype. It is almost cylindrical in plan view, and pale flesh in colour. There is no trace of dorsal bands.

Variation. The shell characters of the paratypes show considerable variation, particularly in lateral spotting (absent in some shells), in the extent of the protrusion of the lower edge of the fossula into the aperture, in weight, in aperture width, and in the constriction of the anterior labial side of the aperture.

The type locality of the species is Victoria, Australia—Flinders south beach through Western Port Bay to San Remo.

MEASUREMENTS.

TABLE 1.

	Holo- type	Paratypes No.							Mean	Para- type No. 1
		2	3	4	5	6	7			
Length (mm.)	24.3	18.9	28.7	21.9	19.7	30.1	25.5	24.2	12½	
Width (percentage length) ..	54	59	56	54	56	53	58	56	52	
Height (percentage length) ..	44	47	46	43	46	43	47	45	40	
Number of labial teeth (<i>A</i>) ..	27	26	28	29	26	30	27	28	..	
Number of columellar teeth (<i>A</i>)	24	23	26	23	23	24	26	24	..	
Protrusion of lower edge of fossula (percentage length) ..	2½	3¼	4½	4½	4	4	3¼	3.7	..	
Weight ($\times 10^4/L^3$) (<i>B</i>) ..	1	1.3	0.7	0.8	0.8	0.6	0.7	0.8	..	
Angle of aperture (<i>C</i>) (degrees)	34	45	48	44	42	57	47	45	..	
Width across aperture (<i>D</i>) (percentage length)	9	8½	10	9½	10½	11	9¾	9.7	..	

NOTES.—A. Corrected to a shell-length of 25 mm. See Schilder and Schilder (1938). All teeth and ridges except the anterior columellar ridge were counted.

B. The factor of 10^4 is introduced to facilitate handling of the results.

C. This is the angle between the tangents to the front and rear of the aperture.

D. Measured from the tip of the front columellar tooth to the line joining the tips of the two nearest teeth to the labial side.

Specimens examined. A holotype and seven paratypes are nominated. Some worn beach shells were also examined, but their condition was not good enough to warrant their being declared type material. Details of the type specimens are as follows:

TABLE 2.

Specimen	Where situated	Where collected
Holotype	Shell and radula in the National Museum, Melbourne; ref. F19903	Flinders south beach. Found by the author under a stone at low tide, 2nd March, 1958
Paratype No. 1 (oliviform)	Author's collection; ref. No. C.2	Under the same stone at the same time as the holotype
Paratype No. 2 ..	Author's collection; ref. No. C.3	Dead on Flinders south beach, February or March, 1958
Paratype No. 3 ..	Author's collection; ref. No. C.7. Formerly in the Gatliff Collection in the National Museum; ref. F19979	San Remo
Paratypes Nos. 4-5 ..	National Museum, Gatliff Collection; ref. F19979	San Remo
Paratypes Nos. 6-7 ..	Collection of Mr. C. J. Gabriel.	Dredged alive in Western Port Bay; on bryozoa.

Photographs of the holotype and of some of the paratypes are given in Plate I.

Apart from the type specimens, other shells examined were three dead shells from Flinders south beach and one dead shell from Ulverstone, Tasmania; all are in the author's collection. Two of the Flinders shells (ref. C.4) are undoubtedly members of the new species. The other two shells (ref. C.5 and C.6 respectively) are probably but not certainly referable to it.

REMARKS.

Although *C. wilkinsi* is clearly distinct from all other species of *Cypraea*, two "varieties" described by Beddome superficially resemble it. Reference to Beddome's papers (1896, 1898), however shows marked differences. *C. alбата* Beddome 1898 (length 25 mm., width 72 per cent. of length, height 60 per cent., 24 labial teeth) is described as snow white, with a heavy labial callus; it is proportionately much wider and taller than *C. wilkinsi*. *C. subcarnea* Beddome 1896 (length 24 mm., width 67 per cent., height 50 per cent., 21 labial teeth, 20 columellar teeth) is also wider and taller, with sides and ends more callous, and with fewer teeth; it has larger and more distinct labial spots, and the general shape of the shell is more ovate.

The retention of the generic name *Cypraea* L.1758 and the use of the name *Notocypraea* Schilder 1927 only as a subgenus is based on the reasons given by Kay (1957); it can also be justified on conchological grounds.

The new species is named in memory of the late Mr. G. L. Wilkins, who formerly worked in the Mollusca Department of the British Museum (Natural History). I am glad to have this opportunity to acknowledge, on behalf of all those he helped, the generous and unstinted assistance and encouragement he gave to so many people.

REFERENCES.

- Beddome, C. E. (1896).—Note on *C. angustata* var. *subcarnae*. *Proc. Linn. Soc., N.S.W.*, XXI, p. 467.
- (1898).—Notes on Species of *Cypraea* inhabiting the shores of Tasmania. *Proc. Linn. Soc., N.S.W.*, XXII, p. 564.
- Kay, A. (1957).—The Genus *Cypraea*. *Nature*, 180, p. 1436.
- Schilder, F. A. and M. (1938).—Prodrome of a Monograph on living *Cypraeidae*. *Proc. Malac. Soc., Lond.*, 23, p. 119.

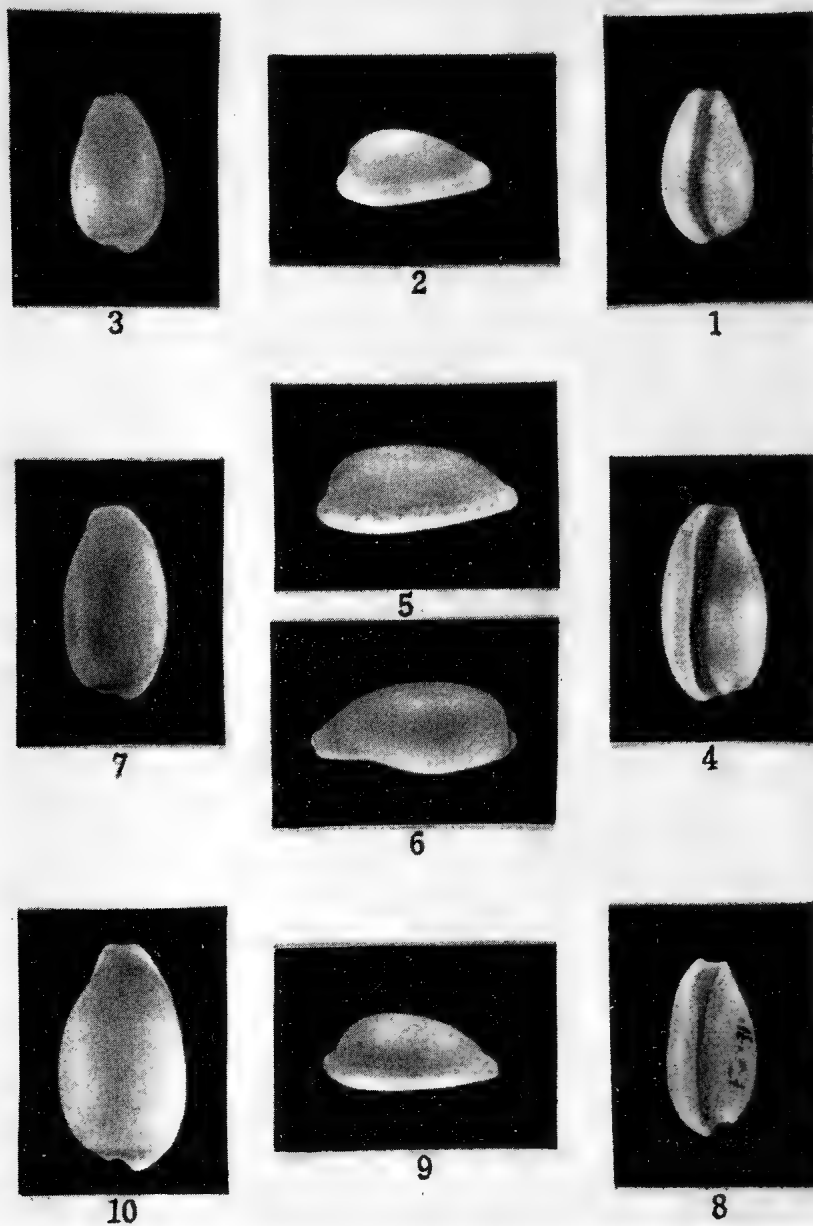


PLATE.

Cypraea (Notocypraea) wilkinsi.

(approximately natural size.)

1-3.—Paratype No. 2.

4-7.—Holotype.

8-9.—Paratype No. 4.

10.—Paratype No. 3.

BIBLIOGRAPHY OF PRINTED LITERATURE UPON VICTORIAN ABORIGINES.

*By Aldo Massola, Curator of Anthropology, National Museum
of Victoria.*

INTRODUCTION.

This Bibliography, as the name suggests, deals only with printed literature (excluding newspapers) upon the Aborigines of Victoria. In some cases, however, as in the Monographs by D. S. Davidson, the original papers deal with the Natives of Australia as a whole. These have been included because they contain also Victorian material.

The present writer has seen most of the works here enumerated but some *Rara Avis* he has not seen are included because reference to them is made by reliable Authors.

A number of works have been omitted because their references to the Victorian Aborigines were too scanty, or of no scientific account. The Author hopes that nothing of any importance has been overlooked. If it has, he would be interested to hear about it.

The material has been presented in geographic and subject divisions, treated together and strictly alphabetically. Every item has been cross-referenced, and an Author Index, referring to the divisions, is added.

In dealing with any particular subject or locality, such as, say, Dartmoor, the user of this Bibliography must also remember that Dartmoor is on the Glenelg River, in the Western District, and that reference to it could also be found in works under General. The serious worker must consult all these divisions. In the case of General, this includes works dealing with Victorian subjects and localities as a whole, such as R. Brough Smyth's "Aborigines of Victoria", or A. W. Howitt's "Native Tribes of South-East Australia".

Smyth's work, as also E. M. Curr's "The Australian Race", have been dissected, as they contain papers by innumerable Authors.

I must acknowledge the great help rendered me by the Librarian of the National Museum of Victoria, Miss J. M. Shaw, B.A., who not only typed the entire proof, but re-checked almost every reference for proper rendering of Authors' names and dates. I must also thank the Officers of the Public Library of Victoria who have always given me every assistance. To all others who assisted in any way whatever my grateful thanks are offered.

REFERENCES.

ADMINISTRATION.

See Missions.

ANTIQUITY.

- Adam, W.—Palate and Upper Dental Arch. (Keilor Skull.) *Mem. nat. Mus. Vic.* 13, 1943.
- Archibald, J.—Notes on the Antiquity of the Aust. Abo. Race. Founded upon the Collection in the Warrnambool Public Museum. *Trans. R. geogr. Soc. Aust/sia* XI. pp. 22-5, 1894.
- The Discovery of the most ancient or Tertiary men in Australia. *Science of Man* I., p. 40, 1898.
- Baragwanath, W.—See Wood-Jones, F., Washington, 1933.
- Branco, W.—Fusspuren in Australien, bei Warrnambool, Victoria und anderen Orten. *Z. deutsch. geol. Ges.* 56, pp. 114-121. Berlin, 1904.
- , Die fraglichen fossilen Menschlichen Fusspuren im Sandsteine von Warrnambool, Victoria, und andere angebliche Spuren des fossilen Menschen in Australien. *Zeit. für Ethn.* 37, pp. 162-72. Berlin, 1905.
- Campbell, T. D.—A suggested reconstruction of the missing anterior teeth of the Cohuna Specimen. *Rec. S. Aust. Mus.* 7, No. 2, p. 235, 1943.
- Carroll, A., (Editor)—Evidence collected to establish the Discovery of the most Ancient Men in Australia. *Science of Man* I., p. 54, 1898.
- , Further evidence to establish discoveries in Warrnambool Quarries. *Science of Man* I., p. 87, 1898.
- De Vis, C. W.—Remarks on a fossil implement and bones of an extinct kangaroo. *Proc. roy. Soc. Vic. (N.S.)* XII. (1), p. 81-6, 1899.
- Ferguson, W. H.—Evidence of the Antiquity of Man in Victoria. *Vic. Nat.* II., p. 87-90, 1894.
- Gill, E. D.—New evidence from Victoria relative to the Antiquity of the Aborigines. Read before A.N.Z.A.A.S., Brisbane, 1951. *Aust. Journ. Science* 14, No. 3, p. 69-73, Dec. 1951.
- , Thylacoleo and Incised bones. *Aust. Journ. Science.* 14, No. 6, p. 201, June 1952.
- , Geological evidence in Western Victoria relative to the Antiquity of the Australian Aborigines. *Mem. nat. Mus. Vic.* 18, p. 25, 1953.
- , Fluorine Tests relative to the Keilor Skull. *Amer. Journ. phys. Anthropol.* XI. N.S., No. 2, June 1953.
- , Fluorine Tests in Aust. on the Keilor Skull and a tertiary marsupial. *Nature* 172, p. 409, Aug. 1953.
- , Current quaternary studies in Victoria, Australia. *Acts du IV. Congres International du Quaternaire*, Rome, 1953.
- , Fluorine-Phosphate Ratios in Relation to the Age of the Keilor Skull, a tertiary marsupial and other fossils from Western Victoria. *Mem. nat. Mus. Vic.* 19, p. 106, 1955.
- , Keilor Man. *Antiquity.* XXVIII., p. 110-13, June, 1954.
- , Aboriginal Midden Sites in Western Victorian dated by Radiocarbon Analysis. *Mankind.* V (2), p. 51, 1955.
- , Radiocarbon Dates for Australian Archaeological and Geological samples. *Aust. Journ. Science.* 18 (2), p. 49-52, 1955.
- , The Age of Keilor Man, Australia. *Anthropos* 50, p. 27, 1955.
- Gregory, J. W.—The Antiquity of Man in Victoria. *Proc. roy. Soc. Vic. (N.S.)* XVII. (1), p. 120-144, 1904.
- Keble, R. A.—Excursion to Keilor. *Vic. Nat.* 63, p. 11, 1946.
- , Notes on Australian Quaternary Climates and Migration. *Mem. nat. Mus. Vic.* 15, 1947.

Antiquity—*continued*.

- Keble, R. A., and MacPherson, J. Hope.—The Contemporaneity of the River Terraces of the Maribyrnong River, Victoria, with those of the Upper Pleistocene in Europe. *Mem. nat. Mus. Vic.* 14 (2), p. 52-68, 1946.
- Keferstein, W.—Bemerkungen über das skelett eines Australien von Stamme Warrnambool. *Nova Acta. Acad. Leop-Carol.* 32 (I), 1865.
- Keith, Sir Arthur.—New Discoveries relating to the Antiquity of man (Cohuna Skull) London, 1931.
- , Review of the Keilor Skull articles published in *Memoirs of the National Museum of Victoria*, No. 13, 1943. *Man* —. 94, 1945.
- Kenyon, A. S.—See Wood-Jones, F., Washington, 1933.
- Lash, R.—Gregory über die ältesten Spuren des Menschen in Australien. *Globus. Braunschweig.* 87, p. 90-91, 1905.
- MacIntosh, N. W. G.—The Cohuna Cranium—history and commentary from Nov. 1925 to Nov. 1951. *Mankind IV.*, No. 8, March 1952.
- , The Cohuna Cranium—teeth and palate. *Oceania XXIII.*, No. 2, Dec. 1952.
- , The Cohuna Cranium—Physiography and chemical analysis. *Oceania XXIII.*, No. 4, June 1953.
- MacPherson, J. Hope.—See Keble, R.A., 1946.
- Mahony, D. J.—On the bones of the Tasmanian Devil and other animals, associated with human remains near Warrnambool, with a note on the dune sand. *Vic. Nat.* XXIX., No. 3, July 1912.
- , See Wood-Jones, F., Washington, 1933.
- , The Problem of Antiquity of Man in Australia. *Mem. nat. Mus. Vic.* 13, 1943.
- , Geological Evidence of Antiquity (Keilor Skull). *Mem. nat. Mus. Vic.* 13, 1943.
- , An Artefact probably of Pleistocene Age from Keilor, Victoria. *Mem. nat. Mus. Vic.* 14 (I), 1944.
- Mulvaney, D. J.—Research into the Prehistory of Victoria, a criticism and a Field Survey. *His. Studies Aust. and N.Z.* 8, No. 29, p. 32, 1957.
- Noetling, F.—Bemerkungen über die angebliche Menschenspur im Sandstein von Warrnambool (Vic.) Australien. *Zbl. Min. Geol. Paläont.*, pp. 498-502, 2 fig., 1907.
- Oakley, K.—Dating Fossil Men. (Keilor Skull.) *Mem. Manchr. lit. phil. Soc.* 98 (6), p. 94, 1956-57.
- Officer, C. G. W.—The supposed human footprints in Aeolian Rocks at Warrnambool. *Vic. Nat.* 8, p. 82-4, 1891.
- , The discovery of supposed human footprints on Aeolian Rock at Warrnambool. *Vic. Nat.* 9, p. 32-39, 1892.
- Tindale, N. B.—Culture succession in South-Eastern Australia from late Pleistocene to the Present. *Rec. S. Aust. Mus.* XIII. (1), p. 1-49, 1957.
- Tugby, D. J.—The Keilor Skulls. *Man* 154, 1951.
- Vallois, N. V.—L'antiquité de l'homme en Australie. *L'Antropologie* 53 (1-2), pp. 158-159, 1949.
- Weidenreich, F.—A Wadjak Type from Southern Australia (Keilor Skull). *Amer. J. Phys. Anthropol.* 3, N.S., No. 1, p. 21-32, 1945.
- Wood-Jones, F.—With W. Baragwanath, D. J. Mahony, A. S. Kenyon.—Fossil Man in the State of Victoria, Australia. Report XVI. *Int. geol. Congr.* Washington, 1933.
- , Tasmanian and Australian Man. *Man* 67, 1934.

Antiquity—*continued*.

Wood-Jones, F. H.—The Antiquity of Man in Australia. *Nature* 153, No. 3877, Feb. 19, 1944.

Wunderley, J.—Anatomical Description (Keilor Skull). *Mem. nat. Mus. Vic.* 13, 1943.

ARARAT.

Banfield, L. L.—Like the Ark, the story of Ararat, pp. 16-25, Melbourne, 1955.
Chauncy, P.—Supplementary list of places and words from Natives at Camperdown, Ararat, Daylesford, Hopkin's River. *Smyth's Aborigines of Victoria II.*, pp. 212-216, 1878.

Massola, A.—The Challicum Bun-yip. *Vic. Nat.* 74 (6), p. 76, 1957.

Mitchell, S. R.—The Mooney Collection of Aboriginal Stone Implements. *Vic. Nat.* 62 (1), p. 10, 1945.

ART.

Barrett, C.—Tommy McCrae, Aboriginal Artist. *Vic. Nat.* 52, p. 86, Sept. 1935.

———, and Croll, R. H.—Art of the Australian Aboriginal, Melbourne 1943.

———, and Kenyon, A. S.—Australian Aboriginal Art. Melbourne 1929, Reprinted 1947-1952-1958.

Croll, R. H.—See Barrett and Croll.

Davidson, D. S.—Preliminary consideration of Aboriginal Australian Decorative Art. *Amer. Philos. Soc. Mem.* 9, 1937.

Kenyon, A. S.—See Barrett and Kenyon.

Murdoch, W. S.—Aboriginal Drawing by Alexander McCrae. *Science of Man* 3 (8), p. 136, 1900.

See also Rock Paintings, Bark Engravings, Ground Drawings.

ARTHUR'S SEAT.

Daley, C.—Arthur's Seat in the Forties. *Vic. Hist. Mag.* 18, p. 57, 1940.

McCrae, G. G.—Aborigines of the Coast. *Vic. Hist. Mag.* I, p. 21, 1911.

———, and Kenyon, A. S.—Notes on Aboriginal Vocabulary of the Western Port Tribe at Arthur's Seat. *Vic. Hist. Mag.* 5, p. 170, 1917.

See also Western Port.

ASTRONOMY.

Stanbridge, W. E.—On the Astronomy and Mythology of the Aborigines of Victoria. *Trans. phil. Inst. Vic.* II. (2), p. 137-40, 1858.

———, General characteristics, Astronomy and Mythology of the Tribes in the Central Parts of Victoria. *Trans. ethnol. Soc. London I. (N.S.)*, p. 286, 1861.

AVOCA.

Chauncy, P.—Names of places and words obtained from the Aborigines belonging to the Tribes inhabiting the districts watered by the Rivers, Loddon, Avoca, Richardson, Wimmera, and Upper Hopkins. *Smyth's Aborigines of Victoria II.*, pp. 204-12, 1878.

Thomas, W.—Vocabulary of Avoca Tribe. *Smyth's Aborigines of Victoria II.*, p. 80, 1878.

BALLAARAT.

Ancient Mining Tools. Singular discovery of a stone implement or weapon at Ballarat. *Dickers Mining Record III.*, No. 7, p. 120, July 23, 1864.

Withers, W. B.—Place names in Ballarat. *History of Ballarat*, p. 13, 2nd Edit. Ballarat, 1887.

———, Photo of last of Ballarat Tribe (in 1851), *idem*, p. 8 (2nd Edition Only).

BALMORAL.

Officer, C. M.—Vocabulary of Glenelg Tribe at Balmoral. Smyth's Aborigines of Victoria II., p. 83, 1878.

BARK ENGRAVING.

Massola, A.—A Victorian Aboriginal Bark Drawing in the British Museum. Vic. Nat. 75 (8), p. 124, 1958.

Smyth, R. B.—Bark Engraving from Lake Tyrell. Smyth's Aborigines of Victoria I., p. 286, 1878.

BARNAWARTHA.

Reid, D.—Vocabulary of Emu Mudjug Tribe at Barnawartha, Murray River. Smyth's Aborigines of Victoria II., p. 68, 1878.

BARRABOOL.

Davenport, Mrs.—Specimens of the Language of the Barrabool Tribe, and list of the members of the Tribe, collect about 1842, by Mrs. Davenport, daughter of the Late Captain Sievwright Assistant-Protector of Aborigines. In Letters from Victorian Pioneers, Melbourne, pp. 307-11, 1898.

BELFAST.

See Port Fairy.

BENDIGO.

Hamilton, J. C.—Burial at the Bendigo Diggings. Pioneering Days in Western Victoria, p. 97, Melbourne, 1923.

BIBLIOGRAPHY.

A.A.A.S.—Report of Committee No. 2, 2nd Meeting, Melbourne, 1890.

Black, G. F.—List of works relating to the Aborigines of Australia and Tasmania. New York Pub. Lib., 1913.

Etheridge, R., Junr.—Contributions to a Catalogue of works, reports and papers of the Anthropology, Ethnology, and Geological History of the Australian and Tasmanian Aborigines. Mem. geol. Surv. N.S.W., Palaeontology No. 8, Pt. I., 1890, Pt. II., 1891, Pt. III., 1895, Sydney.

Foy, W.—Australien 1903/04. Archiv für Religionswissenschaft 8, pp. 526-49, Leipzig, 1905.

McLaren, I. F.—Victorian Parliamentary Papers relating to the Aborigines. Biblionews 10 (9), Sydney, 1957.

Towle, C. C.—A Bibliography of Stone Arrangements found in Australia. Mankind II. (7), p. 216, 1939.

BOORT.

Godfrey, H.—Vocabulary of Lower Loddon Tribe at Boort. Smyth's Aborigines of Victoria II., p. 82, 1878.

BRIDGEWATER LAKES.

Mulvaney, D. J.—Research into the Prehistory of Victoria, a criticism and a Field Survey. Hist. Studies Aust. and N.Z. 8, No. 29, p. 42, 1957.

BUNBANG.

Corney, F.—Vocabulary of the Language of the Laitchi-Laitchi Tribe at Bunbang, on the Murray River. Curr's Aust. Race III., p. 452, 1887.

BURIALS.

- Brunton, A. A.—An Aboriginal Burial Mound. *Vic. Nat.* 73, p. 67, 1956.
Casey, D. A.—Letter to Editor *re* Reported Burial Mound. *Vic. Nat.* 73, p. 112, 1956.
Eyre, E. J.—Burial at Lake Boga. *Journals of Expeditions of Discovery II.*, p. 350, London, 1845.
Hamilton, J.—Burial at the Bendigo Diggings. *Pioneering days in Western Victoria*, p. 97, Melbourne, 1923.
James, G. F.—A Homestead History. Alfred Joyce of Plaistow and Norwood. 1843-64 (Funeral Rites, &c.), Chapter VII., p. 72-9, 1942, Melbourne.
Kenyon, A. S.—Aboriginal Burial Customs, *Vic. Nat.* 44, p. 171, October, 1927.
Le Souef, A. A. C.—Cremation of a native. W. H. D. Le Souef's "Wild Life in Australia", p. 52, Melbourne (N.D. about 1907).
Massola, A.—Native Burials at Gunbower. *Vic. Nat.* 75, p. 25, 1958.
Thomas, N. W.—The Disposal of the Dead in Australia. *Folklore*, 19, pp. 388-408, 1908.
Wright, W. H.—Burial Customs of Wimmera Aborigines. *Smyth's Aborigines of Victoria I.*, p. 108, note., 1878.

BUSHY PARK.

- Thomas, W.—Vocabulary of Flooding Creek and Bushy Park Tribe. *Smyth's Aborigines of Victoria II.*, p. 91, 1878.

CAMPERDOWN.

- Casey, D. A.—Flint Implement from Camperdown. *Mem. nat. Mus. Vic.* IX., p. 92, 1936.
Chauncy, P.—Supplementary list of Places and Words from natives at Camperdown, Ararat, Daylesford, Hopkins River. *Smyth's Aborigines of Victoria II.*, pp. 212-216, 1878.
Gill, E. D.—The Australian Aborigines and fossils. *Vic. Nat.* 74 (7), p. 92, 1957.
Scott, R. D.—Vocabulary of Colungulac Tribe at Camperdown. *Smyth's Aborigines of Victoria II.*, p. 88, 1878.

CANNIBALISM.

- Eyre, E. J.—"Cannibalism at Lake Tarong" Report of Mr. Protector Sievwright reprinted from Parliament. *Papers on Australian Aborigines for August, 1844. Journals of Expeditions of Discovery II.*, p. 255-258, London, 1845.
Howitt, A. W.—Cannibalism among the Gippsland Aborigines. *Smyth's Aborigines of Victoria I.*, p. 246, 1878.
Siewwright, C. W.—Cannibalism at Lake Tarong. *Great Britain Parliamentary Papers* 34, p. 240, 1844.

CANOES.

- Cary, J. J.—Canoes of Geelong Aborigines. *Geelong Nat. I.* (2nd Ser.), No. 2, pp. 32-37, 1904.
Davidson, D. S.—Chronology of Australian Watercraft. *Jour. Polyn. Soc.* 44, No. 1-4, 1935.
Howitt, A. W.—Form of Bark Canoe. *Smyth's Aborigines of Victoria I.*, pp. 408-11, 1878.
Thomas, N. W.—Australian Canoes and Rafts. *Journ. Anthropol. Inst.* 35, pp. 56-79, 1905.

CARNGHAM.

Porteous, A.—Native names of places in the District of Carngham. Smyth's *Aborigines of Victoria II*, pp. 178-179, 1878.

———, Vocabulary of Mount Emu Tribes at Carngham. Smyth's *Aborigines of Victoria II*, p. 87, 1878.

CARR'S PLAIN.

Wettenhall, R.—Photograph of Natives at Carr's Plain (Mallee), 1873. *Vic. Hist. Mag.* 21 (I), p. 29, 1945.

———, Aboriginal names for implements at Carr's Plain. *Vic. Hist. Mag.* 21 (I), p. 28, 1945.

CENTRAL VICTORIA.

Curr, E. M.—Notes on the language of the Aborigines of Central Victoria. *Curr's Aust. Race III*, p. 524, 1887.

Parker, E. S.—*Aborigines of Australia (Central Vict. Tribes) Pamphlet*, 1854.

Stanbridge, W. E.—General Characteristics, Astronomy and Mythology of the Tribes in the Central Part of Victoria. *Trans. ethnol. Soc. London I. (N.S.)*, p. 286, 1861.

CEREMONIES.

Howitt, A. W.—The Jeraeil, or Initiation Ceremonies of the Kurnai Tribe. *Journ. anthrop. Inst. XIV.*, p. 301, 1885.

———, Account of the ceremony known as Jerryale. Smyth's *Aborigines of Victoria I*, 62, 1878.

———, Notes on Songs and Songmakers of some Australian Tribes. *Journ. anthrop. Inst.* 16, pp. 327-335, 1887.

Mathews, R. H.—The Victorian Aborigines: their initiation ceremonies and divisional systems. *Amer. Anthropol.* II., pp. 325-343, 1898.

———, Some initiation ceremonies of the aborigines of Victoria. *Zeit. Ethn.* 37, pp. 872-879, 1905.

Tapling, G.—Ceremonies attending the initiation of youth. Smyth's *Aborigines of Victoria I*, p. 65, 1878.

COHUNA.

Campbell, T. D.—A suggested reconstruction of the missing anterior teeth of the Cohuna Specimen. *Rec. South Aust. Mus.* 7 (2), p. 235, 1943.

Keith Sir Arthur.—New discoveries relating to the Antiquity of Man (Cohuna Skull). London, 1931.

MacIntosh, N. W. G.—The Cohuna Cranium, history and commentary from Nov. 1925 to Nov. 1951. *Mankind IV.*, No. 8, March, 1952.

———, The Cohuna Cranium—Teeth and Palate. *Oceania XXIII.*, No. 2, Dec. 1952.

———, The Cohuna Cranium—Physiography and Chemical Analysis. *Oceania XXIII.*, No. 4, June 1953.

COLAC.

Cary, J. J.—Vocabularies of the Geelong and Colac Tribes, collected in 1840. *A.A.A.S.* 7, pp. 840-872, Sydney 1898.

Dennis, W.—Vocabulary of Colac Tribe. Smyth's *Aborigines of Victoria II*, p. 89, 1878.

Lloyd, G. T.—Thirty-three years in Tasmania and Victoria. (*Vocabulary of Colac Tribe*, p. 470), London, 1862.

Tuckfield, F.—Specimen of language spoken by the Koligan, or Colack natives. *Great Britain Parliamentary Papers*, 34, p. 227, 1844.

CORANDERRK.

Board appointed to enquire into, and report upon the present conditions and management of the Coranderrk Aboriginal Station. Vict. Parl. Pap., 5/1882.

Board for the Protection of the Aborigines of Victoria. Remarks on the Report of the Board Appointed, &c. Vict. Parl. Pap., 15/1882.

Charnay, D.—Rapports sur une Mission dans l'île de Java et en Australie, 1881.

Green, J.—Specimens of Phrases—Coranderrk, Upper Yarra. Smyth's Aborigines of Victoria II., p. 98, 1878.

———, Native Names of Plants—Coranderrk. Smyth's Aborigines of Victoria II., pp. 170-174, 1878.

Victorian Parliamentary Papers—Coranderrk Aboriginal Station. Return showing the Value of the Produce of Cultivated Lands at Coranderrk, for the Year 1868. Parl. Pap. A27/1869.

Moseley, H. N.—Notes by a Naturalist on the Challenger, pp. 261-263, London, 1879.

Shaw, E. History of Coranderrk Aboriginal Station, Victoria 12th Annual Report of the Victorian Aboriginal Group, 1941.

———, Early days among the Aborigines. Melbourne N.D., (about 1948).

CORIO.

See Geelong.

CORROBOREE.

Cotton, J.—Corroboree on the Goulburn. R. V. Bills and A. S. Kenyon "Pastures New", p. 237, Melbourne, 1930.

Le Souef, A. A. C.—Corroboree. W. H. D. Le Souef's "Wild Life in Australia", p. 58, Melbourne (N.D. about 1907).

CRAWFORD RIVER.

Tyers, C. J.—Vocabularies of the Language spoken by the Tribes inhabiting the Country about the Rivers Crawford, Stokes and lower parts of the Wannon and Glenelg. Smyth's Aborigines of Victoria II., pp. 64-66, 1878.

DARBYSHIRE.

Mitchell, S. R.—Petrographs in the Koetong Creek Valley (Darbyshire). Vic. Nat. 70, p. 219, April, 1954.

Tugby, D. J.—Conic Range Rock Shelter (Rock Paintings in the Koetong Creek Valley, near Darbyshire). Mankind, 4, p. 446, 1953.

DARTMOOR.

Curr, E. M.—Language Spoken at Dartmoor. Curr's Aust. Race III., p. 484. 1887.

DAYLESFORD.

Chauncy, P.—Supplementary list of Places and words from Natives at Camperdown, Ararat, Daylesford, Hopkins River. Smyth's Aborigines of Victoria II., p. 212-16, 1878.

Stanbridge, W. E.—Vocabulary of Monulgundeech Tribe at Daylesford. Smyth's Aborigines of Victoria., II., p. 81, 1878.

DISEASES.

Hughan, F.—Diseases of the Natives of the Lower Murray. Smyth's Aborigines of Victoria I., p. 261, note, 1878.

Meyrick, F. J.—Life in the bush (Native Doctor effecting a cure near Frankston), p. 133, Melbourne, 1939.

Thomas, W.—Account of the Malady called Marm-bu-la or Taking of the Kidney Fat. Smyth's Aborigines of Victoria I., p. 470, 1878.

DISTRIBUTION.

- Davidson, D. S.—A Preliminary Register of the Aust. Tribes and Hordes. Amer. Phil. Soc., pp. 158, 1938.
- Fison, L.—Distribution of Tribes (The Kulin Nation). Handbook of the Australasian Association, p. 48, Melbourne, 1890.
- Krefftt, G.—On the Vertebrata of the Lower Murray and Darling, their habits, economy and geographical distribution. Trans. Phil. Soc. N.S.W., pp. 1-33, 1862-5 (1866).
- Le Souef, A. A. C.—Notes on Central Victorian Tribes, Distribution and Language. Curr's Aust. Race III., pp. 523-524, 1887.
- Mathew, J.—The Origin, Distribution and Social Organization of the inhabitants of Victoria, before the advent of Europeans. Vic. Hist. Mag. I., (3), pp. 79-89, 1911.
- Tindale, N. B.—"Victorian Tribes" in Distribution of Australian Aboriginal Tribes. A Field Survey (with map). Trans. roy. Soc. S. Aust. 64, p. 196, 1940.

DONALD.

- "Past and Present" Donald, June, 1926.

ECHUCA.

- Beveridge, P.—Aborigines of Victoria and Riverina, 1889.
- Strutt, C. E.—Vocabulary of Echuca Tribe. Smyth's Aborigines of Victoria II., p. 68, 1878.

EUMERALLA.

- Boldrewood, R. (T. A. Browne).—Old Melbourne Memories. 1st Ed., Melb. 1884. 2nd Ed., London, 1896, Rev. Ed., London, 1899.
- Curr, E. M.—Language Spoken at Portland, Lake Condah and Eumeralla. Curr's Australian Race III., p. 490, 1887.

EUSTON.

- Photograph of Whorlong of Euston Tribe. Vic. Hist. Mag. IV., p. 190, 1915.

FIGHTING.

- Kersaw, J. A.—Battles long ago (Le Souef's Account). Vic. Nat. XLIV., p. 306-7, 1928.
- Le Souef, A. A. C.—Native Warfare. W. H. D. Le Souef's "Wild Life in Australia" p. 56 Melbourne (N. D. about 1907).
- , Account of Aboriginal fight on the Lower Goulburn. Vic. nat. XLIV., p. 306-7, 1928.
- Thomas, W.—Method of Fighting. Smyth's Aborigines of Victoria I., pp. 158-160, 1878.

FIRE MAKING.

- Davidson, D. S.—Fire making in Australia. Amer. Anthropol. 49 (3), pp. 426-37, 1947.
- Smyth, R. B.—Exhibition of and Remarks on Fire Sticks. (Wenth-Kalk-Kalk), Trans. roy. Soc. Vic. VI., xxxiv, 29th June, 1863 (1865).
- Thomas, W.—Method of obtaining Fire. Smyth's Aborigines of Victoria I., p. 394 note, 1878.

FLAT ROCK.

- Massola, A.—Aboriginal Paintings at the Flat Rock Shelter. Vic. nat. 73 (2), pp. 21-23, 1956.
- , More Paintings on Flat Rock. Vic. nat. 73 (5), pp. 65-7, 1956.

FLOODING CREEK.

Thomas, W.—Vocabulary of Flooding Creek and Bushy Park. Smyth's Aborigines of Victoria II., p. 91, 1878.

FOOD.

Cairns, J.—On the Bullrush. Trans. phil. Inst. Vic. 3, p. 35, 1859.

Cleland, J. B.—Some aspects of the Ecology of the Aboriginal inhabitants of Tasmania and Southern Australia. Pap. roy. Soc. Tasm., pp. 1-18, 1939 (1940).

Daley, C.—The Bogong moth. Vic. nat. Vol. XLVIII., No. 11, p. 227, March, 1932.

Le Souef, W. H. D.—Aboriginal Culinary Methods and Kitchen Middens. Vic. geogr. Journ. 32 (1), pp. 1-11, 1916.

Mueller, Baron F. von—List of Vegetables commonly eaten by the Natives of Victoria. Smyth's Aborigines of Victoria I., pp. 212-14, 1878.

———, Waffen der Eingebornen aus Australien, Neuseeland u. a. Z. Ethn. 3, p. 177, 1890.

FRAMLINGHAM.

Osburne, R.—The Aboriginal Station, Framlingham. The History of Warrnambool, pp. 193-99, Prahran 1887.

GEELONG.

Bonwick, J.—William Buckley, the Wild White Man, and his Port Phillip Black Friends, pp. vi and 100, Melbourne, 1856.

———, The Wild White Man and the Blacks of Victoria (2nd Edition of above), Melbourne 1863.

Brownhill, W. R.—"The Aborigines" Chap. IV., of "The History of Geelong and Corio Bay", Melbourne 1955.

Cary, J. J., Vocabularies of the Geelong and Colac Tribes collected in 1840. A.A.A.S., Sydney 1898.

———, Canoes of Geelong Aborigines. The Geelong nat., 2nd Ser. I., No. 2, pp. 32-37, 1904.

Curr, E. M.—The Jibberin Language spoken on the Moorabool. Curr's Aust. Race III., p. 518, 1887.

Fraser, J., The Woddowro Pronouns. Wombat V., No. 1, p. 6, 1902.

Gellibrand, J. T.—Mr. J. T. Gellibrand's Memoranda of a trip to Port Phillip in 1836. Trans. phil. Inst. Vic. III., p. 63, 1859.

Gellibrand's Memorandum of a Trip to Port Phillip. Letters from Victorian Pioneers p. 279, Melbourne 1908.

Langhorne, G.—Account of W. Buckley. Chap. III., of W. R. Brownhill's "The History of Geelong and Corio Bay". Melbourne 1955.

Mathews, R. H.—Language of the Wuddyawurru Tribe. Zeit. für Ethn. Jahr. 36, pp. 729-734, 1904.

Melbournensis (M. Watson).—The Aborigines of Australia, Irish Monthly 5, pp. 344-345, 1877.

Morgan, J.—The Life and Adventures of William Buckley &c., Hobart 1852.

Pike, W. T. (Editor)—The Story of William Buckley. Cole, Melbourne 1889.

———, Thirty Years among the Blacks of Australia (Life and adventures of W. Buckley). London 1904.

Russell, G.—Aborigines of the Geelong District. Geelong nat. 2nd Ser. I., pp. 52-58, Sept. 1904.

Shillinglaw, J.—Journal of the Rev. Knopwood (first native killed, 23rd Oct. 1803). Historical records of Port Phillip, p. 92, Melbourne 1870.

Geelong—continued.

- Tuckfield, F.—Specimen of Language Spoken by the Woddowrong, or Corio Natives. G.B. Parliamentary Papers 34, p. 227, 1844.
 Photograph of the last man of the You-Yang Tribe, Billie Light. Weekly Times 27.4.1912.

GENERAL.

- Arden, G.—See Port Phillip Gazette (General).
 Backhouse, J.—Narrative of a visit to the Aust. Colonies. London 1843.
 Barrett, C., and Kenyon, A. S.—“The Tribes of the South” in the “Blackfellows of Australia.” Sun Nature Book N.D. (1936).
 Bonwick, J.—William Buckley, the Wild White Man, and his Port Phillip Black Friends, pp. vi and 100, Melbourne, 1856.
 ———, The Wild White Man and the Blacks of Victoria, (2nd Ed. of above), Melbourne 1863.
 Bride, T. F., (Editor)—“Letters from Victorian Pioneers” (has references to Victorian aboriginies). Melbourne 1898.
 Chauncy, P.—Notes and Anecdotes of the Aborigines of Australia (Mostly Western Australian and Victorian). Smyth's Aborigines of Victoria II., pp. 221-284, Appendix A, 1878.
 Curr, E. M.—The Australian Race 4 Vols., Melbourne 1886. (Victorian Tribes in Vol. 3.)
 Davidson, D. S.—The relation of Tasmanian and Australian Cultures. Philadelphia Anthropol. Soc. Pub. No. 1, pp. 47-62, 1937.
 Dredge, J.—Brief Notices of the Aborigines of New South Wales including Port Philip. Geelong 1845.
 Fison, L.—The Aborigines of Victoria. Handbook of the Australasian Association, Melbourne, p. 45, 1890.
 ———, see Howitt, A. W. and Fison, L.—Melbourne 1900.
 Great Britain.—Parliamentary Papers (Copies or Extracts of despatches relative to the massacre of various aboriginies of Australia, in the year 1838 and respecting the trial of their murderers), 34, 1839.
 ———, Papers Relative to the Aborigines, 34, 1844.
 Haydon, H.—Five Years Experience in Australia Felix. (Ethnological Details), pp. iv and 168, London 1846.
 Heaton, J. H.—Aboriginal Cricketers. Aust. Dictionary of Dates and Men of the Time, Part II., p. 1, Sydney 1879.
 ———, On the Origin, the manners, customs, and institutions, and the annihilation of the Aborigines of Australia. Roy. Soc. of Literature, Series 2, 14, pp. 92-129, London. No date (about 1882).
 Hinkins, J. T.—Life amongst the Native Race or Life amongst the Victorian Blacks, Melb., 1884.
 Hopton, A. J.—Rural Port Phillip 1834-1851. J. Proc. Roy. Aust. hist. Soc. XXXVI., Part V., pp. 233-294, Part VI., pp. 297-388, 1950.
 Howitt, A. W.—The Native Tribes of South-East Australia. London 1904.
 ———, The Native Tribes of South-East Australia (Supplementary to his Volume of the same Title). Folk-lore 17, pp. 107-110, London 1906.
 ———, and Fison, L.—The Aborigines of Victoria. Handbook Aust. Association, Melbourne 1900.
 Hull, W.—Remarks on the probable Origin and Antiquity of the Aboriginal Natives of N.S.W. &c., by a Colonial Magistrate, Melbourne 1846.
 Jamieson, H.—Letter from Hugh Jamieson, Esq., to the Right Reverend the Lord Bishop of Melbourne, on the Aboriginal Natives of Australia. Letters from Victorian Pioneers. Melbourne, pp. 269-275, 1898.

General—*continued*.

- Jung, K. E.—*Der Weltteil Australien* (Chapter on Victoria), II. pp. 46-74, Leipzig 1883.
- Kenyon, A. S.—*The Story of Melbourne*. Melbourne 1934.
- , see Barrett, C., (General).
- Kerr, J. H.—see Resident (General).
- Kyle, W.—*Reminiscences of Aboriginal Life in Victoria and N.S.W.* Geelong nat. 2nd Series 2 (3), pp. 159-172, 2 (4), pp. 182-86, 1906.
- Lang, J. D.—*Phillipsland*. Edinburgh 1847, Port Phillip, 2nd Edition of above, p. 123, Glasgow 1853.
- Le Souef, A. A. C.—*Notes on the Natives of Australia*. Smyth's *Aborigines of Victoria*, II., Appendix C., pp. 289-298, 1878.
- Le Souef, W. H. D.—*Wild Life in Australia*, pp. 50-65, Melbourne (N.D. about 1907).
- Mackanness, G.—*George Augustus Robinson's Journey into S. E. Australia, 1844, with George Henry Haydon's narrative of part of the same Journey*. Sydney 1941.
- Mathew, J.—*The Australian Aborigines*. Proc. roy. Soc. N.S.W., XXIII., p. 335, 1889.
- , *Eaglehawk and Crow*. London and Melbourne 1899.
- , *Origin, Distribution and Social Organization of the inhabitants of Victoria, before the Advent of Europeans*. Vic. His. Mag. I., p. 79, 1911.
- Mathews, R. H.—*Ethnological Notes on the Abo. Tribes of N.S.W. and Victoria*. Journ. Anthropol. Institute 14, 1885.
- , *The Victorian Aborigines*. Amer. Anthropol. XI., pp. 331-6, 1898.
- , *The Native Tribes of Victoria, their Language and Customs*. Amer. Phil. Soc. Proc. 43, pp. 54-70, 1904.
- Mitchell, Maj. T. L.—*Three Expeditions into the Interior of Eastern Australia* (1st Edition) 2, London 1838, (2nd Edition) 2, London 1839.
- N.S.W. Votes and Proceedings.—*Replies to a circular on the subject of Aborigines, addressed to gentlemen residing too remote from Sydney to expect the favour of their personal attendance upon the Commission*. June 1841.
- Oberländer, R.—*Die Eingeborenen der Australischen Kolonie Victoria*. Globus IV.
- Parker, E. S.—*N.S.W. Votes and Proceedings Legislative Council for 1843* (Victorian Tribes).
- Port Phillip Gazette (George Arden).—*Latest information with regard to Australia Felix. Sketches of the Aboriginal population by the Editor of the Port Phillip Gazette*. Melbourne 1840.
- "Resident" (J. H. Kerr).—*Glimpses of Life in Victoria*, p. 185, Edinburgh 1872.
- Robarts, N.—*The Victorian Aborigine as he is*. A.A.A.S. XIV., p. 444, Melbourne 1913.
- Smith, J.—*The Aborigines*, pp. 8-18 of his *Cyclopedia of Victoria*. Melbourne 1903.
- Smyth, R. Brough.—*The Aborigines of Victoria*. 2 Vols., 1878.
- Sutherland, A.—*Victoria and its Metropolis*. Melbourne 1888.
- Thomas, W.—*Remarks on the Aborigines of Victoria, 1838-9*, Melbourne 1859.
- , *Brief account of the Aborigines of Australia Felix*, in "*Letters from Victorian Pioneers*", pp. 65-100, Melbourne, 1898.
- Westgarth, W.—*Report, Commercial, Statistical and General on the district of Port Phillip, New South Wales for the half year ended 31st July 1846*. Melbourne 1846.

General—continued.

- Westgarth, W.—Report on the condition, capabilities and prospects of the Australian Aborigines. Melbourne 1846.
- , Australia Felix. London 1848.
- , Australia Felix (German Translation of above). Edinburgh, Dec. 1848.
- , Report on the condition and prospects of the Aborigines of Australia. Journ. of the Indian Archipelago 5, pp. 704-728, Singapore 1851.
- , On the condition and prospects of the Aborigines of Australia. Edinburgh New Philos. Journal 53, pp. 225-241; 54, pp. 36-45, 1852-53.
- , The Aboriginal Natives, in his: The Colony of Victoria &c., pp. 224-234, London 1864.
- Wood-Jones, F.—The Aborigines of Victoria. A.N.Z.A.A.S. Handbook for Victoria, pp. 136-142, Melbourne 1935.
- Worsnop, T.—The Prehistoric Arts, Manufactures, Works, Weapons, &c., of the Aborigines of Australia. Adelaide 1897.

GIPPSLAND.

- Bulmer, J.—Account of the movements of the Natives in the South-eastern part of Victoria during the several seasons. Smyth's Aborigines of Victoria I., pp. 141-3, 1878.
- , Account of the Brabrolung Tribe (Gippsland). Curr's Australian Race III., pp. 544-551, 1887.
- , Aborigines of Lower Murray, Wimmera, Gippsland, and Maneroo. Trans. Proc. roy. Geogr. Soc. Aust. (Vic. Branch) V., pt. 1, pp. 15-43, 1888.
- Buntine, W.—White Woman detained by Gippsland Natives. Vic. Hist. Mag. 3, p. 174, 1914.
- Curr, E. M.—The Language Spoken in Gippsland. Curr's Australian Race III., p. 552, 1887.
- Daley, C.—Aborigines in Gippsland. Vic. Hist. Mag. VII., pp. 136-142, 1919.
- Finn, E.—See Garryowen (Gippsland).
- Fison, L., and Howitt, W.—Kamilaroi and Kurnai. Melbourne, 1880.
- Garryowen (E. Finn).—White women captured by the Blacks. In "Chronicles of Early Melbourne" II., pp. 602-11, Melbourne, 1888.
- Hagenauer, F. A.—Vocabulary of Language spoken in Gippsland. Curr's Australian Race III., p. 554, 1887.
- Horne, G.—Aboriginal Stone Implements of South-Eastern Victoria. A.A.A.S. Hobart, 1921.
- , Aboriginal coast camps of Eastern Victoria. Vic. Nat. 38, p. 48, 1921.
- Howitt, A. W.—Notes on the System of consanguinity and kinship of the Brabrolong Tribe North Gippsland. Smyth's Aborigines of Victoria II., pp. 323-332, App. F., 1878.
- , Names of Places in Gippsland. Ibid. II., pp. 188-90, 1878.
- , Cannibalism amongst the Gippsland Aborigines. Ibid. I., p. 246, 1878.
- , The Dialect of the Brabrolong and Neighbouring Tribes. Ibid. II., pp. 48-55, 1878.
- , Form of Bark Canoe. Ibid. I., pp. 408-11, 1878.
- , The Jeraeil, or initiation ceremonies of the Kurnai Tribe. Journ. Anthropol. Inst. XIV., p. 301, 1885.
- , On the migrations of the Kurnai Ancestors. Ibid. XV., p. 409, 1886.
- , Vocabulary of Language Spoken in Gippsland. Curr's Australian Race III., p. 556, 1887.
- , and Fison, L.—Kamilaroi and Kurnai. Melbourne, 1880.
- MacKenzie, Sir Colin. "The Aborigines of South Gippsland" in "A Short History of Central South Gippsland", by H. S. Malone. Melbourne, 1932.

Gippsland—continued.

- McCombie, T.—White woman supposed to be detained by Gippsland Aborigines in "The History of the Colony of Victoria", p. 124, Melbourne, 1858.
Mathews, R. H.—Language of the Birdhawal Tribe in Gippsland, Victoria. Amer. Phil. Soc. Proc. 46, pp. 346-59, 1907.
N.S.W. Legislative Council Votes and Proceedings.—White female with Gippsland Aboriginal Tribe. No. 10, pp. 163-176, 1846.

GLENELG RIVER.

- Curr, E. M.—Language Spoken on the Glenelg above Woodford. Curr's Aust. Race III., p. 480, 1887.
———, Language of the Upper Glenelg and Wannon. Curr's Aust. Race III., p. 478, 1887.
McLeod, H. L.—Native names of Places in the Glenelg District. Smyth's Aborigines of Victoria II., p. 176, 1878.
Mulvaney, D. J.—Research into the Prehistory of Victoria, a criticism and a field survey. Hist. Studies Aust. and N.Z. 8, No. 29, p. 38, 1957.
Tyers, C. J.—Vocabularies of the Language spoken by the Tribes, inhabiting the country about the Rivers Crawford, Stokes, and lower parts of the Wannon and Glenelg. Smyth's Aborigines of Victoria II., pp. 64-66, 1878.

GLEN ISLA.

- Adam, L.—Preliminary Report of the Melbourne University Expedition to Glen Isla. Melbourne University Gazette VI., No. 10, p. 96, December, 1950.
———, The Rock Paintings near Glen Isla Victoria Range, Victoria. Mankind IV., p. 343, 1952.
Barrett, C.—Brimgower Cave. Wild Life Magazine 5, No. 4, p. 125, Melbourne, 1943.
Davidson, D. S.—Aboriginal Australian and Tasmanian Rock Carvings and Paintings. Mem. Amer. Phil. Soc. V., 1936.
Kenyon, A. S.—Aboriginal Rock Paintings at Glen Isla—in Camping places of the Aborigines of S.E. Australia. Vic. Hist. Mag. II., p. 97, 1912.
———, Photos of Cave of Hands at Glen Isla, Grampians. In the Art of the Aust. Aboriginal Vic. Nat. 54, No. 6, p. 91, October, 1937.
Massola, A.—New Aboriginal Rock Paintings in the Victoria Range. Vic. Nat. 75, p. 73, 1958.
Mathew, J.—Notes on Aboriginal Rock Paintings in the Victoria Range, County of Dundas, Victoria. Proc. roy. Soc. Vic. (n.s.) IX., pp. 29-33, 1897.
Walton, W. J.—Aboriginal Rock Paintings Figured by D. S. Davidson in his recent monograph. Mankind 2, No. 4, p. 96, 1937.

GLENORCHY.

- Dennis, W.—Vocabulary of Djappuminyou Tribe at Glenorchy. Smyth's Aborigines of Victoria II., p. 79, 1878.
Wilson, S.—Native names of places in Vicinity of Glenorchy. Smyth's Aborigines of Victoria II., p. 177, 1878.

GONN CROSSING.

See Gonn Station.

GONN STATION.

- McCarthy, J.—Vocabulary of Language spoken at Gonn Station, Murray River. Curr's Aust. Race III., p. 506, 1887.

GOULBURN.

- Baylie, W. H.—On the Aborigines of the Goulburn District, their superstitions, manners, and habits. *Ham's Port Phillip Magazine*, I., pp. 86-92, 134-9, 188-91, Melbourne, 1843.
- Blandowski, W.—The Personal Observations made in an Excursion towards the Central Parts of Victoria. *Trans. phil. Soc. Vic. I.*, p. 72-4, Melbourne, 1855.
- Cotton, J.—"Native of the Goulburn" (account of a Corroboree), "The Letters of a pioneer", Appendix to "Pastures New", by R. V. Billis, and A. S. Kenyon, pp. 237-239, Melbourne, 1930.
- Curr, E. M.—Recollections of Squatting in Victoria (Lower Goulburn), Melbourne, 1883.
- Curr, E. M.—Language of the Bangerang Tribe, on the Lower Goulburn. *Curr's Aust. Race III.*, p. 567, 1887.
- , Language spoken from Seymour to Murchison, part of the Goulburn River—known as Ngooraialum Language. *Ibid. III.*, p. 528, 1887.
- , Notes on the Aborigines of Central Victoria—language. *Ibid. III.*, p. 524, 1887.
- Green, J.—Vocabulary of Goulburn Tribe. *Smyth's Aborigines of Victoria II.*, p. 115, 1878.
- Le Souëf, A. A. C.—Notes on Central Victorian Tribes—Distribution and Language. *Curr's Aust. Race III.*, pp. 523-524, 1887.
- , 1. Cremation of a native, p. 52. 2. Native warfare, p. 56. 3. Corroboree, p. 58. W. H. D. Le Souëf's "Wild Life in Australia". Melbourne (N.D., about 1907).
- , Account of Aboriginal Fight on the Lower Goulburn. *Vic. Nat. XLIV.*, p. 306, 1928.
- Mackaness, G.—The Correspondence of John Cotton (Corroboree), part 1, p. 44, Sydney, 1953.
- Massola, A.—The Native Water Well at Whroo, Goulburn Valley, *Vic. Nat. 74* (3), pp. 41-44, 1957.
- , Notes on the Natives formerly inhabiting the Goulburn Valley. *Vic. Hist. Mag. XXVIII.* (2), p. 45, 1958.
- Public Library of Victoria.—Dialect of Lower Goulburn Tribe. "Vocabulary of Dialects", compiled for Intercolonial Exhib., Melbourne, 1867.
- Tuckfield, F.—Specimen of Language spoken by the Jhongworong, or Goulburn Natives. *G. Britain Parliamentary Papers 34*, p. 227, 1844.

GRAMPIANS.

- Hall, C. B.—The Natives (Grampians). (Fish and Bird Catching, burials, food, &c), in *Letters from Victorian Pioneers*, pp. 217-222, Melbourne, 1898.
- See also Glen Isla and Rock Paintings.

GROUND DRAWINGS.

- Massola, A.—The Challicum Bun-yip. *Vic. Nat. 74* (6), p. 76, 1957.

GUIDES.

- Kenyon, A. S., and Mahony, D. J.—Guide to the Stone Implements of the Australian Aborigines in the National Museum, Melbourne, 1914.
- Mahony, D. J.—See Kenyon, A. S., and Mahony, D. J.
- Public Library of Victoria.—Catalogue of the Objects of Ethnotypical Art in the National Gallery, Melbourne, 1878.
- Spencer, Sir Baldwin.—Guide to the Australian Ethnological Collection in the National Museum of Victoria. 1st Ed. 1901; 2nd Ed. 1915; 3rd Ed. 1922.

GUNBOWER.

- Blandowski, W.—Recent Discoveries in Natural History on the Lower Murray. Trans. phil. Inst. Vic. 2, p. 136, 1857.
Hinkins, J. T.—Life amongst the Native Race or Life amongst the Victorian Blacks. Melbourne, 1884.
Houston, G.—Vocabulary of Gunbower Tribe. Smyth's Aborigines of Victoria II., p. 69, 1878.
Mackie and Sandy.—Language Spoken at Gunbower Station. Curr's Aust. Race III., p. 508, 1887.
Massola, A.—Native Burials at Gunbower. Vic. Nat. 75, p. 25, 1958.
Sandy.—See Mackie and Sandy.

HAMILTON.

- Curr, E. M.—Language Spoken at Hamilton. Curr's Aust. Race III., p. 486, 1887.
Learmonth, P.—Vocabulary of the Upper Wannon Tribe at Hamilton. Smyth's Aborigines of Victoria II., p. 84, 1878.

HAMPDEN.

- Scott, R.—Native Names of Places in the counties of Hampden and Heytesbury. Smyth's Aborigines of Victoria II., pp. 180-186, 1878.

HEALESVILLE.

- Curr, E. M.—The Oorongir Language spoken at Healesville—Upper Yarra. Curr's Aust. Race III., p. 530, 1887.

HEYTESBURY.

- Scott, R.—Native names of Places in the Counties of Hampden and Heytesbury. Smyth's Aborigines of Victoria II., pp. 180-186, 1878.

HOPKINS RIVER.

- Chauncy, P.—Names of Places and Words obtained from the Aborigines belonging to the Tribes inhabiting the Districts watered by the Rivers, Loddon, Avoca, Richardson, and Upper Hopkins. Smyth's Aborigines of Victoria II., pp. 204-212, 1878.
— — —, Supplementary list of Places and Words from Natives at Camperdown, Ararat, Daylesford, Hopkins River. Ibid. II., pp. 212-216, 1878.
Curr, E. M.—Language Spoken on the Hopkins River. Curr's Australian Race III., p. 492, 1887.
Goodhall, W.—Vocabulary of the Language Spoken on the Hopkins River. Curr's Aust. Race III., p. 494, 1887.

HORSHAM.

- Francis, J.—Vocabulary of Lake Hindmarsh and Horsham Tribes. Smyth's Aborigines of Victoria II., p. 77, 1878.
Wilson, C.—Vocabulary of Horsham Tribe. Ibid. II., p. 77, 1878.

IMPLEMENTS.

- Balfour, H.—Strangling Cords from the Murray River, Victoria, Australia. Man 94, 1901.
Davidson, D. S.—Australian netting and basketry techniques. Jour. Polyn. Soc. 42 (4), pp. 257-99, 1933.
— — —, Australian Spear traits and their distributions. Journ. Polyn. Soc. 43 (2-3), pp. 41-72, 145-62, 1934.
— — —, The Spear-thrower in Australia. Proc. Amer. phil. Soc. 76 (6), pp. 445-85, 1936.

Implements—*continued*.

- Davidson, D. S.—Australian throwing sticks, throwing clubs, and boomerangs. *Amer. Anthrop.* 38 (1), pp. 76-100, 1936.
- , Notes on two variant Australian Baskets. *Mankind* 2, No. 4, pp. 86-88, 1937.
- , Transport and Receptacles in Aboriginal Australia. *Journ. Polyn. Soc.* 48 (4), pp. 175-205, 1937.
- Etheridge, R., Jun.—Notes on Australian Shields, more particularly the Drumung. *Jour. Anthrop. Inst.* 26, pp. 153-61, 1897.
- Howitt, A. W.—Notes on Australian Message sticks and Messengers. *Jour. Anthrop. Inst.* 18, pp. 314-332, 1889.
- McCarthy, F. D.—The bone point known as Muduk in Eastern Australia. *Rec. Aust. Mus.* XX. (5), pp. 313-19, 1940.
- Massola, A.—Australian Fish Hooks and their Distribution. *Mem. nat. Mus. Vic.* 22 (1), 1956.
- , Victorian Aboriginal Strangling Cords. *Mem. nat. Mus. Vic.* 22 (3), 1956.
- Mitchell, S. R.—An Aboriginal Bone Industry. *Mankind* 5 (5), p. 194, 1958.
- Worsnop, T.—The Prehistoric Arts, manufactures, works, weapons, &c., of the Aborigines of Australia. Adelaide, 1897.
- See also Stone Implements.

KEILOR.

- Adam, W.—Palate and Upper Dental Arch of Keilor Skull. *Mem. nat. Mus. Vic.* 13, 1943.
- Gill, E. D.—Fluorine Tests relative to the Keilor Skull. *Amer. Jour. Phys. Anthropol.* XI. n.s., No. 2, June, 1953.
- , Fluorine Tests in Australia on the Keilor Skull and a Tertiary Marsupial. *Nature* 172, p. 409, Aug., 1953.
- , Fluorine Phosphate Ratios in relation to the age of the Keilor Skull, a Tertiary Marsupial and other Fossils from Western Victoria. *Mem. nat. Mus. Vic.* 19, p. 106, 1955.
- , Keilor Man. *Antiquity* 28, pp. 110-13, 1954.
- , The Age of Keilor Man, Australia. *Anthropos.* 50, p. 27, 1955.
- Keble, R. A.—Excursion to Keilor. *Vic. Nat.* 63, p. 11, 1946.
- Keble, R. A., and MacPherson, J. Hope.—The Contemporaneity of the river terraces of the Maribyrnong River, Victoria, with those of the Upper Pleistocene in Europe. *Mem. nat. Mus. Vic.* 14 (2), pp. 52-68, June, 1946.
- Keith, Sir Arthur.—Review of the Keilor Skull articles published in *Memoirs of the National Museum of Victoria*, No. 13, 1943. *Man* 94, 1945.
- MacPherson, J. Hope.—See Keble, R. A., and MacPherson, J. Hope.
- Mahony, D. J.—The Keilor Skull, Geological evidence of Antiquity. *Mem. nat. Mus. Vic.* 13, 1943.
- , An Artefact probably of Pleistocene Age from Keilor, Victoria. *Mem. nat. Mus. Vic.* 14 (1), 1944.
- Oakley, K.—Dating Fossil Men. *Mem. Manchr. lit. phil. Soc.* 98 (6), p. 94, 1956-57.
- Tugby, D. J.—The Keilor Skulls. *Man* 154, 1951.
- Weidenreich, F.—A Wadjak Type from Southern Australia (Keilor Skull). *Amer. Journ. phy. Anthropol.* 3 n.s. (1), pp. 21-32, 1945.
- Wood-Jones, F.—Keilor Skull. *Nature* 153, No. 3877, 19th February, 1944.
- Wunderley, J.—Keilor Skull, anatomical Description. *Mem. nat. Mus. Vic.* 13, 1943.

KERANG.

- Curr, E. M.—Language Spoken at Kerang, on the Loddon River. *Curr's Aust. Race* III., p. 512, 1887.
Munro, N.—Native Words and Names obtained from Henry Taverner Esq., of Kerang, Lower Loddon. *Smyth's Aborigines of Victoria* II., p. 218, 1878.

KOONDROOK.

- Spencer, Sir Baldwin.—Kitchen Middens and Native Ovens. *Vict. Nat.* 35 (7), p. 113, 1918.

KOTOOPNA.

- Locke, W.—Notes on the language and customs of the Tribe inhabiting the country known as Kotoopna. *Smyth's Aborigines of Victoria, Appendix G.*, II., pp. 333-5, 1878.

KOTUPNA.

- See Kotoopna.

KULKYNE.

- Beveridge, P.—Vocabulary of Kulkyne Tribe. *Smyth's Aborigines of Victoria* II., p. 71, 1878.
Curr, E. M.—Language of the Kulkyne Blacks. *Curr's Aust. Race* III., p. 454, 1887.
MacIntyre, A.—Vocabulary of Kulkyne Tribe. *Smyth's Aborigines of Victoria* II., p. 70, 1878.

KULNYNE.

- See Kulkyne.

LAKE BOGA.

- Chase, S. L.—Moravian Mission at Lake Boga, Statement of the causes which led to its relinquishment, July, 1st, 1856. Melbourne (pamphlet).
Curr, E. M.—Language spoken in the neighbourhood of Lake Boga, probably at Moorerbat and on the Lower Loddon. *Curr's Aust. Race* III., p. 504, 1887.
Eyre, E. J.—Burial at Lake Boga. *Journals of Expeditions of Discovery* II., p. 350, London, 1845.
Fawcett, L.—Vocabulary of Language spoken at Lake Boga. *Curr's Aust. Race* III., p. 502, 1887.
Moravian Mission.—Report of the Moravian Mission at Lake Boga. *Missionblatt aus den Brüdergemeinde* XVII., 1852.
———, Reports Nos. 1, 2. Melbourne, 1860, 1861.
Stone, A. C.—The Aborigines of Lake Boga (with vocabulary). *Proc. roy. Soc. Vic. (N.S.)* 23, part 2, pp. 433-468, 1911.

LAKE CONDAH.

- Curr, E. M.—Language Spoken at Portland, Lake Condah and Eumeralla. *Curr's Aust. Race* III., p. 490, 1887.
Dunn, E. J.—Australites. *Bull. Geol. Sur. Vic.* 27, p. 14, 1912.
Green, J.—Vocabulary of Lake Condah Tribe. *Smyth's Aborigines of Victoria* II., p. 116, 1878.
Kenyon, A. S.—Fishery at Lake Condah (with diagram). *Vic. Hist. Mag.* II., p. 97, 1912.
———, Stone Structures of the Australian Aborigines. *Vic. Nat.* 47, pp. 71-5, 1930.

Lake Condah—*continued*.

- Shaw, J.—Sentences in the Native Languages of Lake Condah, Victoria. Smyth's *Aborigines of Victoria II.*, p. 63, 1878.
 ———, Lake Condah—Native Names of Plants. *Ibid.* II., p. 174, 1878.
 Stähle, J. H.—The Gournditch-Mara Tribe of Lake Condah—in Howitt and Fison's *Kamilaroi and Kurnai*, Appendix F., pp. 274-278, 1880.

LAKE CONNEWARREN.

- Chauncy, P.—On Native ovens, with diagram of one on Lake Connewarren, near Mortlake. Smyth's *Aborigines of Victoria II.*, Appendix A., p. 232, 1878.

LAKE HINDMARSH.

- Curr, E. M.—Language spoken at Lake Hindmarsh, Upper Regions, and Lower Wimmera. *Curr's Aust. Race III.*, p. 474, 1887.
 Eyre, E. J.—Short Vocabulary of Dialect of Lake Hindmarsh. *Journals of Expeditions of Discovery II.*, p. 397, London, 1845.
 Francis, J.—Vocabulary of Lake Hindmarsh and Horsham Tribes. Smyth's *Aborigines of Victoria II.*, p. 77, 1878.
 Hartmann, A.—Specimens of phrases—Lake Hindmarsh. Smyth's *Aborigines of Victoria II.*, p. 96, 1878.
 ———, Native Names of places in the district of Lake Hindmarsh. *Ibid.* II., p. 176, 1878.
 ———, Native Names of Plants—Lake Hindmarsh. *Ibid.* II., pp. 172-174, 1878.
 Public Library of Victoria.—Bewa dialect of Lake Hindmarsh. *Vocabulary of Dialects compiled for Intercol. Exh.*, Melbourne, 1867.
 Spieseke, F. W.—Specimens of the Language spoken by the Aboriginal Tribes of Lake Hindmarsh. Smyth's *Aborigines of Victoria II.*, pp. 55-58, 1878.
 ———, Vocabulary of Kurm-me-lak Tribe, at Lake Hindmarsh. *Ibid.* II., p. 76, 1878.

LAKE TYERS.

- Birdsell, J. B., and Boyd, W. C.—Blood groups in the Australian Aborigines. *Amer. J. phys. Anthropol.* 27 (1), p. 69, 1940.
 Boyd, W. C.—See Birdsell, J. B., and Boyd, W. C.
 Bulmer, J.—Language of the Natives of Lake Tyers, Gippsland. Smyth's *Aborigines of Victoria II.*, pp. 24-39, 1878.
 ———, Vocabulary of the Bundah Wark Kani, or the Swan Reach Tribe at Lake Tyers. *Ibid.* II., p. 93, 1878.
 ———, Specimens of phrases from Lake Tyers. *Ibid.* II., p. 96, 1878.
 ———, Native names of Places in the Vicinity of Lake Tyers, Gippsland. *Ibid.* II., p. 191, 1878.
 Graydon, J. J.—See Simons, R. T., and Graydon, J. J.
 Public Library of Victoria.—Dialect of Lake Tyers Tribe. *Vocabulary of Dialects compiled for Intercol. Exh.*, Melbourne, 1867.
 Simmons, R. T., and Graydon, J. J.—The Rh Blood Types in Australian Aborigines. *Med. J. Aust.*, p. 113, July 31st, 1948.
 The last of the Victorian Aborigines: Catalogue issued in connexion with an exhibition of portraits at the Athenaeum Gallery, September, 1934 (Melbourne).

LAKE TYRELL.

- Smyth, R. Brough.—Bark Engraving from Lake Tyrell. *Aborigines of Victoria* I., p. 286, 1878.
 Stanbridge, W. E.—On the Astronomy and Mythology of the Aborigines of Victoria. *Trans. Phil. Soc. Vic.* 2, pp. 137-140, 1857.
 ———, Astronomy of Boorong Tribe, Lake Tyrell in General Characteristics, Astronomy and Mythology of the Tribes in the Central Part of Victoria. *Trans. Ethn. Soc. London* I. (N.S.), pp. 301-304, 1861.

LAKE WALLACE.

- Curr, E. M. —Language spoken at Lake Wallace and neighbourhood. *Curr's Aust. Race* III., p. 476, 1887.

LAKE WELLINGTON.

- Hagenauer, F. A.—Specimens of Phrases—Lake Wellington. *Smyth's Aborigines of Victoria* II., p. 97, 1878.
 ———, Native Names of places in the vicinity of Lake Wellington. *Ibid.* II., p. 190, 1878.

LAKE WONGAN.

- Casey, D. A.—Aboriginal Ceremonial Ground, Lake Wongan. *Vic. Nat.* LIV. (9), p. 130, 1938.
 Chauncy, P.—Stone Structures —Lake Wongan. *Smyth's Aborigines of Victoria* II., p. 235, 1878.

LANCEFIELD.

- Blandowski, W.—Lancefield Quarry in "The Personal Observations in the Central Parts of Victoria". *Trans. phil. Inst. Vic.* I., p. 56, 1857.
 "C.H.D."—A visit to the Aboriginal Stone-hammer Quarries, Mt. William, Lancefield, Victoria. *The Bankers' Magazine of Australasia*, pp. 582-85, March, 1894.
 Davis, C. L.—A visit to the Aboriginal Stone-hammer Quarries, Mt. William, Lancefield, Victoria. *Science of Man* I., p. 113, 1898.
 Gross, A.—Excursion to Mt. William. *Vic. Hist. Mag.* 27, p. 37, 1955.
 Guthridge, J. T.—The Stone Age —the Aborigines of the Lancefield District. Lancefield, 1907, 2nd Edition, with Supplement, Lancefield, 1910.
 Hall, T. S.—Excursion to Mt. William, Lancefield (Geology of Mt. William, Photo of Quarry). *Vic. Nat.* XXV., pp. 9-11, 1908.

LANGI GHIRAN.

- Davidson, D. S.—Aboriginal Australian and Tasmanian Rock Carvings and Paintings. *Mem. Amer. phil. Soc.* V., 1936.
 Kenyon, A. S.—Australian Aboriginal Art. Melbourne, 1929.
 Massola, A.—A Re-interpretation of "The Cave of the Serpent". *Vict. Nat.* 74 (5), p. 63, 1957.

LANGUAGE.

- Beveridge, J.—Vocabulary of the Language of the Swan Hill and Tyntynder Tribe. *Curr's Australian Race* III., pp. 439-445, 1887.
 Beveridge, P.—A few notes on the dialects, habits, customs and mythologies of the Lower Murray Aborigines. *Trans. and Proc. roy. Soc. Vic.* VI., pp. 14-24, 1865.
 ———, Vocabulary of Kulkyne Tribe. *Smyth's Aborigines of Victoria* II., p. 71, 1878.

Language—*continued.*

- Beveridge, P.—Language spoken by the Watty-Watty and Litchoo-Litchoo Tribes at Tyntynder. *Ibid.* II., p. 73, 1878.
- , Language spoken at Junction of Morcovia Creek and River Murray. *Ibid.* II., p. 72, 1878.
- Bulmer, J.—Language of the Natives of Lake Tyers, Gippsland. *Ibid.* II., pp. 24-39, 1878.
- , Vocabulary of the Bundah Wark Kani, or the Swan Reach Tribe, at Lake Tyers. *Ibid.* II., p. 93, 1878.
- , Specimens of phrases from Lake Tyers. *Ibid.* II., p. 96, 1878.
- , Language spoken at Omeo. *Curr's Aust. Race* III., p. 558, 1887.
- , Language spoken on the Snowy River. *Ibid.* III., p. 560, 1887.
- Bunce, D.—Language of the Aborigines of the Colony of Victoria. 1st Ed. Melbourne, 1851, 2nd Ed. Melb. and Castlemaine, 1856, 3rd Ed. (marked 2nd) Geelong, 1859. Re-arranged by Brough Smyth. *Aborigines of Victoria* II., p. 133, 1878.
- Cary, J. J.—Vocabularies of the Geelong and Colac Tribes. Collected in 1840. A.A.A.S., Sydney, 1898.
- Chauncy, P.—Names of Places and words obtained from the Aborigines belonging to the Tribes inhabiting the Districts watered by the Rivers—Loddon, Avoca, Richardson, Wimmera, and Upper Hopkins. *Smyth's Aborigines of Victoria* II., pp. 204-212, 1878.
- , Supplementary list of Places and words from Natives at Camperdown, Ararat, Daylesford, Hopkins River. *Ibid.* II., pp. 212-216, 1878.
- Clarke, H.—On the Yarra dialect and the languages of Australia in connexion with those of Mozambique and Portuguese Africa. *Trans. and Proc. roy. Soc. Vic.* XVI., pp. 170-76, 1880.
- Corney, F.—Vocabulary of the Language of the Laitchi-Laitchi Tribe at Bung Bong, on the Murray River. *Curr's Aust. Race* III., p. 452, 1887.
- Curr, E. M.—Language spoken in Gippsland. *Curr's Aust. Race* III., p. 552, 1887.
- , Language spoken at Woodford. *Ibid.* III., p. 482, 1887.
- , Language spoken at Dartmoor. *Ibid.* III., p. 484, 1887.
- , Language of the Upper Glenelg and Wannon. *Ibid.* III., p. 478, 1887.
- , Language of Morton Plains. *Ibid.* III., pp. 469 and 472, 1887.
- , Language spoken at Lake Wallace and Neighbourhood. *Ibid.* III., p. 476, 1887.
- , Language spoken on the Hopkins River. *Ibid.* III., p. 492, 1887.
- , Language spoken on the Glenelg, above Woodford. *Ibid.* III., p. 480, 1887.
- , Language of the Mount Rouse Tribe. *Ibid.* III., p. 488, 1887.
- , Language spoken at Hamilton. *Ibid.* III., p. 486, 1887.
- , Language spoken about 50 miles southerly from Swan Hill. *Ibid.* III., p. 446, 1887.
- , Language spoken in the Tatiarra Country. *Ibid.* III., p. 458, 1887.
- , Language spoken at Piangil. *Ibid.* III., p. 450, 1887.
- , Language spoken at Mordiyallock. *Ibid.* III., p. 534, 1887.
- , The Panyool Dialect of Mount Hope. *Ibid.* III., p. 510, 1887.
- , Language spoken at Kerang on the Loddon River. *Ibid.* III., p. 512, 1887.
- , Language of the Kulkyne Blacks. *Ibid.* III., p. 454, 1887.
- , Language of the Toolinyagan Tribe at Ulupna. *Ibid.* III., p. 586, 1887.
- , Language of the Ngarrimowro Tribe, near Yulima, on both sides of the Murray. *Ibid.* III., p. 588, 1887.

Language—continued.

- Curr, E. M.—Language spoken at Natty-Yallock and Stuart Mill. *Ibid.* III., p. 514, 1887.
- , Language of the Pikkolatpan Tribe, of Tocumwall, on the Murray. *Ibid.* III., p. 584, 1887.
- , Language spoken at Portland, Lake Condah, and Eumeralla. *Ibid.* III., p. 490, 1887.
- , Language spoken in the neighbourhood of Lake Boga, probably at Moorambat, and on the Lower Loddon. *Ibid.* III., p. 504, 1887.
- , Language spoken at Lake Hindmarsh, upper regions and lower Wimmera. *Ibid.* III., p. 474, 1887.
- , The Ngooraialum Language spoken from Seymour to Murchison, part of the Goulburn River. *Ibid.* III., p. 528, 1887.
- , Notes on the Language of the Aborigines of Central Victoria. *Ibid.* III., p. 524, 1887.
- , The Jibberin Language spoken on the Moorabool. *Ibid.* III., p. 518, 1887.
- , Language of the Bangerang Tribe, on the Lower Goulburn. *Ibid.* III., p. 567, 1887.
- , The Oorongir language spoken at Healesville. *Ibid.* III., p. 530, 1887.
- Davenport, Mrs.—Specimens of the Language of the Barrabool Tribe, and list of the Members of the Tribe, collected about 1842, by Mrs. Davenport, daughter of the Late Capt. Sievwright, Assistant-Protector of Aborigines. In "Letters from Victorian Pioneers", pp. 307-311, Melbourne, 1898.
- Dennis, W.—Vocabulary of Colac Tribe. Smyth's Aborigines of Victoria II., p. 89, 1878.
- , Vocabulary of Djappuminyou Tribe at Glenorchy. *Ibid.*, p. 79, 1878.
- Eyre, E. J.—Table showing specimens of the difference of Dialects spoken by the Native Tribes of Port Phillip. *Journals of Expeditions of Discovery* II., p. 400, 1845, London.
- , Short vocabulary of dialect of Lake Hindmarsh. *Journals of Expeditions of Discovery* II., p. 397, 1845, London.
- Fawcett, L.—Vocabulary of Language spoken at Lake Boga. *Curr's Aust. Race* III., p. 502, 1887.
- Francis, J.—Vocabulary of Lake Hindmarsh and Horsham Tribes. Smyth's Aborigines of Victoria II., p. 77, 1878.
- Fraser, J.—The Woddowro pronouns. *The Wombat* V., No. 1, p. 6, 1902.
- Godfrey, H.—Vocabulary of Lower Loddon Tribe at Boort. Smyth's Aborigines of Victoria II., p. 82, 1878.
- Goodall, W.—Vocabulary of the Language spoken on the Hopkins River. *Curr's Aust. Race* III., p. 494, 1887.
- Gray, C.—Words in the Dialect of the Tribes near Wickliffe. Smyth's Aborigines of Victoria II., pp. 58-60, 1878.
- , Vocabulary of River Hopkins Tribe at Wickliffe. *Ibid.* II., p. 87, 1878.
- Green, J.—Vocabulary of Yarra Tribe. *Ibid.* II., pp. 99-115, 1878.
- , Native names of plants at Coranderrk. *Ibid.* II., pp. 170-174, 1878.
- , Vocabulary of Woewoorong, or Yarra Tribe. *Ibid.* II., p. 90, 1878.
- , Vocabulary of the Goulburn Tribe. *Ibid.* II., p. 115, 1878.
- , Vocabulary of Lake Condah Tribe. *Ibid.* II., p. 116, 1878.
- , Specimens of phrases, Coranderrk, Upper Yarra. *Ibid.* II., p. 98, 1878.
- Hagenauer, F. A.—Vocabulary of Mount Wellington Tribe. *Ibid.* II., p. 92, 1878.

Language—continued.

- Hagenauer, F. A.—Language of the Natives of the Pine Plain Tribe, North Wimmera and generally understood in the Western District, the Loddon and Swan Hill. *Ibid.* II., pp. 39-48, 1878.
- , Specimens of phrases Lake Wellington. *Ibid.* II., p. 97, 1878.
- , Vocabulary of Language spoken in Gippsland. *Curr's Aust. Race* III., p. 554, 1887.
- Hartmann, A.—Native names of plants at Lake Hindmarsh. *Smyth's Aborigines of Victoria* II., pp. 170-174, 1878.
- , Specimens of phrases, Lake Hindmarsh. *Ibid.* II., p. 96, 1878.
- Haynes, W.—Vocabulary of the language spoken in the Tatiarra Country. *Curr's Aust. Race* III., p. 456, 1887.
- Houston, G.—Vocabulary of Gunbower Tribe. *Smyth's Aborigines of Victoria* II., p. 69, 1878.
- Howitt, A. W.—The Dialect of the Brabrolong and neighbouring Tribes. *Ibid.* II., pp. 48-55, 1878.
- , Vocabulary of language spoken in Gippsland. *Curr's Aust. Race* III., p. 556, 1887.
- Jackson, J. H.—Vocabulary of the Wannon Tribe, Meerinygil, at Sandford. *Smyth's Aborigines of Victoria* II., p. 84, 1878.
- Jamieson, H.—Vocabulary of Yerre-Yerre Tribe at Mildura. *Ibid.* II., p. 74, 1878.
- Keble, R. A.—Aboriginal Plant Names, Their Etymology. *Vic. Nat.* XXXIV., pp. 61-76, 1917.
- Kenyon, J.—The Aboriginal Word Book. (Contains a number of Victorian words.) 1st Edit. Melbourne, 1930, 2nd Edit. Melbourne, 1951.
- Learmonth, P.—Vocabulary of the Upper Wannon Tribe at Hamilton. *Smyth's Aborigines of Victoria* II., p. 84, 1878.
- Livingstone, H.—Grammar and Vocabulary of the Minyung People. In *Trelkeld's An Australian Language as spoken by the Awakabal*, 1892.
- Locke, W.—Notes on the Language and customs of the Tribe inhabiting the Country known as Kotoopna. *Smyth's Aborigines of Victoria*, Appendix G., II., pp. 333-335, 1878.
- MacCredie, T.—Vocabulary of language spoken at Piangil. *Curr's Aust. Race* III., p. 448, 1887.
- MacIntyre, A.—Vocabulary of Kulkyne Tribe. *Smyth's Aborigines of Victoria* II., p. 70, 1878.
- McCarthy, J.—Vocabulary of Language spoken at Gonn Station, Murray River. *Curr's Aust. Race* III., p. 506, 1887.
- McCrae, G. G.—A Vocabulary of the Western Port Tribe at Arthur's Seat. *Vic. Hist. Mag.* 5, p. 164, 1917.
- McLachlan, R.—Vocabulary of Upper Richardson Tribe. *Smyth's Aborigines of Victoria* II., p. 80, 1878.
- McLeod, J. N.—Vocabulary of Tourahonong Tribe at Portland. *Smyth's Aborigines of Victoria* II., p. 85, 1878.
- McLeod, —.—Phrases in the Laichi-Laichi Language. *Curr's Aust. Race* III., p. 438, 1887.
- Mathews, R. H.—Language of some Native Tribes, &c. (Yotayota and Bureba). *Journ. Proc. roy. Soc. N.S.W.* 36, pp. 135-190, 1902.
- , The Aboriginal Languages of Victoria. *Ibid.* 36, pp. 71-106, 1902.
- , Notes on some Native Dialects of Victoria. *Ibid.* 37, pp. 243-253, 1903.
- , Some aboriginal languages of Queensland and Victoria. *Proc. Amer. phil. Soc.* 42, pp. 179-188, 1903.

Language—continued.

- Mathews, R. H.—Native Languages of Victoria. *Amer. Anthrop. (N.S.)* 5, pp. 380-382, 1903.
- , Die Sprache des Tyeddyuwurru—Stammes des Eingeboren von Victoria *Anthrop. Ges. Wien* 34, pp. 71-76, 1904.
- , The Native Tribes of Victoria, Their Language and Customs. *Proc. Amer. phil. Soc.* 43, pp. 54-70, 1904.
- , Language of the Wuddyawurru Tribe, Victoria. *Zeit. für Ethn. Berlin*, Jahrg. 36, pp. 729-734, 1904.
- , Language of the Birdhawal Tribe in Gippsland, Victoria. *Proc. Amer. phil. Soc.* 46, pp. 346-359, 1907.
- , The Dhudhuroa Language of Victoria. *Amer. Anthrop. (N.S.)* VII., pp. 278-284, 1909.
- Mackie and Sandy Language spoken at Gunbower Station. *Curr's Aust. Race* III., p. 508, 1887.
- Mitchell, T.—Vocabulary of Pallanganmiddah Tribe at Tangambalanga, Murray River. *Smyth's Aborigines of Victoria* II., p. 67, 1878.
- , Language spoken on the Upper Murray. *Curr's Aust. Race* III., p. 562, 1887.
- Mueller, Baron F. von.—Plants with Native Names. (1) From Coranderrk, (2) From Lake Hindmarsh, (3) From Lake Condah. *Smyth's Aborigines of Victoria* II., pp. 170-74, 1878.
- Munro, N.—Native words and names obtained from Henry Taverner Esq., of Kerang, Lower Loddon. *Smyth's Aborigines of Victoria* II., p. 218, 1878.
- Murdoch, W. L.—Language spoken at Wangaratta. *Science of Man* III. (II.), 1900.
- , Upper Murray Language. *Ibid.* III., (II.), 1900.
- Musgrove, A. M.—Vocabulary of Warrnambool Tribe. *Smyth's Aborigines of Victoria* II., p. 86, 1878.
- Officer, C. M.—Vocabulary of Glenelg Tribe at Balmoral. *Ibid.* II., p. 83, 1878.
- Parker, J.—Dialect of the Ja-jow-er-ong Race. With a short account of their traditional history and superstitions. *Ibid.* II., pp. 154-165, 1878.
- Parker, E. S.—Specimen of five dialects spoken by the Aborigines of the North-Western District. *Great Britain Parliamentary Papers* 34, p. 317, 1844.
- , Names of Aborigines—Lar-ne-barramul, River Loddon. *Ibid.*, 34, pp. 312-316, 1844.
- Porteous, A.—Vocabulary of Mount Emu Tribe at Carngham. *Smyth's Aborigines of Victoria* II., p. 87, 1878.
- Public Library of Victoria.—Vocabulary of dialects spoken by Aboriginal Natives of Australia compiled by the Trustees for the Intercolonial Exhibition, Melbourne, 1867.
- , Vocabulaire des dialectes des Aborigenes de l'Australie (*Exposition Intercolonial Melbourne, 1866*). Mostly Victorian dialects, Melbourne 1867. French Edition of above.
- , Dialect of Maryborough Tribe in Vocabulary of Dialects, &c., compiled for Intercolonial Exhibition, Melbourne, 1867.
- , Bewa Dialect of Lake Hindmarsh—see above.
- , Dialect of Upper Murray Tribe—see above.
- , Dialect of Mount Rouse Tribe—see above.
- , Dialect of Mount Talbot Tribe—see above.
- , Dialect of Lower Goulburn Tribe—see above.
- , Dialect of Lake Tyers Tribe—see above.

Language—*continued*.

- Public Library of Victoria.—Dialect of Swan Hill Tribe—see above.
- , Dialect of Wannon-Yarlook Tribe—see above.
- , Dialect of Lower Murray Tribe—see above.
- Reid, D.—Vocabulary of Emu Mudjug Tribe Barnawartha, Murray River. Smyth's *Aborigines of Victoria* II., p. 68, 1878.
- Ridley, W.—Report on Australian Languages and Traditions. *Journ. Anthop. Inst.* 2, pp. 257-291, 1873.
- , *Kamilaroy and other Australian Languages*. Sydney, 1875 (Sec. Edition.)
- Sandy.—See Mackie and Sandy.
- Schmidt, P. W.—*Die Gliederung der Australischen Sprachen*. (Victorian Languages, pp. 67, 73-92), Wien, 1919.
- Scott, R. D.—Vocabulary of Colongulac Tribe at Camperdown. Smyth's *Aborigines of Victoria* II., p. 88, 1878.
- Shaw, J.—Sentences in the Native Language of Lake Condah, Victoria. *Ibid.* II., p. 63, 1878.
- , Native names of plants, at Lake Condah. *Ibid.* II., pp. 170-174, 1878.
- Spieseke, F. W.—Vocabulary of Kurm-me-lak Tribe, at Lake Hindmarsh. *Ibid.* II. p. 76, 1878.
- , Specimens of the Language spoken by the Aboriginal Tribes of Lake Hindmarsh. *Ibid.* II., pp. 55-58, 1878.
- Stanbridge, W. E.—Vocabulary of Monulgundeech Tribe at Daylesford. *Ibid.* II., p. 81, 1878.
- Stewart, D.—Vocabulary of the Boandek Tribe and Account of Mt. Gambier Blacks. *Curr's Aust. Race* III., pp. 460-65, 1887.
- Strutt, C. E.—Vocabulary of Echuca Tribe. Smyth's *Aborigines of Victoria* II., p. 68, 1878.
- Thomas, W.—Vocabulary of Avoca Tribe. *Ibid.* II., p. 80, 1878.
- Thomas, W.—Vocabulary of Boon-oor-rong Tribe at Western Port. *Ibid.* II., p. 90, 1878.
- , Vocabulary of Flooding Creek, and Bushy Park Tribes. *Ibid.* II., p. 91, 1878.
- , Succinct Sketch of the Aboriginal Language. Select Committee on Aborigines of the Legislative Council of Victoria, 1858/9. Reprinted in Smyth's *Aborigines of Victoria* II., pp. 118-133, 1878.
- Thornley, N.—Some words of the language of the Western Tribes of Victoria. *Ibid.* II., pp. 60-62, 1878.
- Threlkeld, L. E.—*Australian Language, &c.* (Awakabal) deals also with Murray Tribes. Sydney, 1892.
- Tuckfield, F.—Specimen of language spoken by the Koligon, or Colack Natives. *Great Britain Parliamentary Papers* 34, p. 227, 1844.
- , Specimen of Language spoken by the Woddowrong, or Corio Natives—see above.
- , Specimen of language spoken by the Jhongworong, or Goulburn Natives—see above.
- , A Specimen of the difference of dialects spoken by the Native Tribes of Port Phillip—see above.
- , Specimen of language spoken by the Gnurrelleean, or Natives West of Campaspee—see above.
- , Specimen of Language spoken by the Pinegorine or Natives of Junction of Goulburn with Murray Rivers—see above.

Language—continued.

- Tuckfield, F. —Specimen of language spoken by the Dautgart, or Natives to the west of Colack—see above.
- Tyers, C. J. Vocabularies of the language spoken by the Tribes inhabiting the Country about the Rivers Crawford, Stokes, and Lower Parts of the Wannon, and Glenelg Rivers. Smyth's *Aborigines of Victoria II.*, pp. 64-66, 1878.
- Wettenhall, R.—Aboriginal names for implements at Carr's Plain. *Vic. Hist. Mag.* 21 (1), p. 28, 1945.
- Wilson, C.—Vocabulary of Horsham Tribe. Smyth's *Aborigines of Victoria II.*, p. 77, 1878.
- Wilson, Sir Samuel, Vocabulary of Language spoken at Mount Emu. *Curr's Aust. Race III.*, p. 516, 1887.

LODDON RIVER.

- Chauncy, P. Names of Places and words obtained from the Aborigines belonging to the Tribes inhabiting the districts watered by the Rivers Loddon, Avoca, Richardson, Wimmera, and Upper Hopkins. Smyth's *Aborigines of Victoria II.*, pp. 204-212, 1878.
- Curr, E. M.—Language spoken in the neighbourhood of Lake Boga, probably at Moorerbart and on the Lower Loddon. *Curr's Aust. Race III.*, p. 504, 1887.
- Godfrey, H.—Vocabulary of Lower Loddon Tribe at Boort. Smyth's *Aborigines of Victoria II.*, p. 82, 1878.
- James, G. F.—A Homestead History, 1843-64. (Chapter VII., pp. 72-9—Funeral Rites—Corroboree, &c.) Melbourne University Press, 1942.
- Mathews, R. H.—Die Sprache des Tyeddyuwurru. *Stammes des Eingebornen von Victoria. Anthropol. Gesell. Wien* 34, pp. 71-76, 1904.
- Munro, N.—Native words and names obtained from Henry Taverner Esq., of Kerang, Lower Loddon. Smyth's *Aborigines of Victoria II.*, p. 218, 1878.
- Parker, E. S.—Native names of Aborigines in Protector Parker's District—La-ne-barramul, River Loddon. *Great Britain Parliamentary Papers* 34, pp. 312-316, 1844.
- , Specimen of five dialects spoken by the Aborigines of the North-West District, River Loddon. *Great Britain Parliamentary Papers* 34, pp. 317-318, 1844.
- , Superstitions, reprinted from "Port Phillip Herald" in T. H. Braim's *History of New South Wales* 2, p. 241, London, 1846.
- , Manners, Customs, and Traditions of the Aborigines of the North-Western or Loddon River District, in *A History of New South Wales*, by T. H. Braim, 2, pp. 241-247, 1846, London.
- Parker, J.—Dialect of the Ja-jou-er-ong Race with a short account of their traditional history and superstitions. Smyth's *Aborigines of Victoria II.*, pp. 154-165, 1878.

LORQUON.

- Gill E. D.—The Australian Aborigines and Fossils. *Vict. Nat.* 74 (7), p. 93, 1957.

MALLEE.

- Cairns, J.—On the Weir Mallee, a water yielding tree. *Trans. phil. Inst. Vic.* III., pp. 33-34, 1859.
- Curr, E. M.—Language spoken about 50 miles southerly from Swan Hill. *Curr's Aust. Race III.*, p. 446, 1887.
- Kenyon, A. S.—Aborigines in Mallee District. *Vic. Hist. Mag.* IV., p. 198, 1915.
- Robinson, G. A.—Abstract of a Journey by G. A. Robinson from the Murray to Mt. Zero. *G.B. Parliamentary Papers* 34, p. 281, 1844.

MAPS.

- Curr, E. M.—Map of North Central Victorian Tribes. Curr's Aust. Race III., p. 566, 1887.
- , Map of Distribution of Australian Tribes. Ibid. IV., 1887.
- Davidson, D. S.—An Ethnic Map of Australia. Proc. Amer. phil. Soc. 78, No. 4, 1938.
- Howitt, A. W.—Map of Kurnai Territory (Gippsland) in Kamilaroi and Kurnai. Melbourne, 1880.
- Howitt, M. E. B.—Sketch Map of Victoria showing the Aboriginal Nations in Handbook of the Australasian Association, Melbourne, p. 64, 1890. Reprinted 1900.
- Smyth, R. Brough.—Map of the distribution of Native Tribes of Victoria. Smyth's Aborigines of Victoria (End of Vol. I.), 1878.
- Tindale, N. B.—Distribution of Australian Aboriginal Tribes. Trans. roy. Soc. S. Aust. LXIV., No. 1, 1940.

MARYBOROUGH.

- Fleet, J.—The Jajaurung, in "Dunolly, the Story of an old Gold Digging's Town", pp. 1-5, Melbourne, 1956.
- Kenyon, A. S.—Aboriginal pigment quarry near Maryborough. Rec. Geol. Surv. Vic. 4 (4), pp. 478-9, 1925.
- Massola, A.—The Native Water Wells at Maryborough, Victoria. Vic. Nat. 73, p. 48, 1956.
- Parker, J.—Dialect of the Ja-jow-er-ong Race, with a short account of their Traditional History and Superstitions. Smyth's Aborigines of Victoria II., pp. 154-165, 1878.
- Public Library of Victoria.—Dialect of Maryborough Tribe, in "Vocabulary of Dialect", &c., compiled for Intercolonial Exhibition, Melbourne, 1867.

MASSACRES.

- Faithfull's party massacre. Full account in the "Albury Banner and Wodonga Express", January 18, 1946.
- Heaton, J. H.—Outrages against Aborigines. Australian Dictionary of Dates, Part II., pp. 5-6, Sydney, 1879.
- Heaton, J. H.—Outrages by Aborigines. Ibid. Part II., p. 6, Sydney, 1879.
- Kirby, T.—Murder of Andrew Beveridge. "Old Times in the Bush of Australia", Melbourne (N.D., about 1896).
- McCombie, T.—Conflicts between Settlers and Natives. The History of the Colony of Victoria, pp. 41-42, 84-97, Melbourne, 1858.
- Victorian Parliamentary Papers.—The Aborigines. Correspondence on the subject of crimes committed by the natives *inter se*, with an opinion of the Attorney-General. Parl. Pap. A5/1858.

MELBOURNE AND SURROUNDINGS.

- Batman's Treaty with Aborigines. Vic. Hist. Mag. II., p. 180, 1912.
- Photo of Billie Berak, last of the Yarra Tribe, taken four months before his death. Journ. Proc. roy. Soc. N.S.W. 37, p. 243, 1903.
- Aborigines Protection Society.—Aborigines of Port Phillip. Extracts, Papers, and Proc. II., 1841.
- Batman, J.—Expedition from Van Diemen's Land to Port Phillip, 1835 (Batman's Official communication to Col. Arthur and replies thereto). Journ. and Pap. of Par., Tasmania, vol. 5, No. 44, 1885.
- Bonwick, J.—The Port Phillip Blacks as they were. "Early Days of Melbourne", Melbourne, 1857.

Melbourne Surroundings—continued..

- Bonwick, J.—Port Phillip Settlement. London, 1887.
- Brown, P. L.—Narrative of George Russell (Corroboree), p. 131, London, 1935.
(Reprinted in F. J. Meyrick's "Life in the Bush", pp. 143-4, Melbourne, 1939.)
- Bunce, D.—Language of the Aborigines of the Colony of Victoria. Melbourne, 1851, 1st Edition, 2nd Edition, Melbourne and Castlemaine, 1856. 3rd Edition (marked 2nd), Geelong, 1859. Re-arranged by B. Smyth in Aborigines of Victoria II., p. 133, 1878.
- Cotton, J.—"Natives around Melbourne" (hut building, tree climbing, &c). "The Letters of a Pioneer". Appendix to "Pastures New", by R. V. Billis and A. S. Kenyon, pp. 228-229, Melbourne, 1930.
- Curr, E. M.—Language spoken at Mordiyallock. Curr's Aust. Race III., p. 534, 1887.
- , Notes on Melbourne Tribe. Ibid. III., p. 527, 1887.
- Daley, C.—Aborigines near Melbourne. "Reminiscences from 1841 of William Kyle—a pioneer." Vic. Hist. Mag. 10, pp. 164-7, 1925.
- Edgar, L. A.—Among the Black Boys. (Merri Creek School), London, 1865.
- Edge-Partington, J.—See Warner, Sir George and Edge-Partington, J.
- Gellibrand, J. T.—Memoranda of a Trip to Port Phillip in 1836. Trans. phil. Inst., Vic. III., p. 63, 1858, (published 1859).
- Gellibrand's Memorandum of a Trip to Port Phillip. Letters from Victorian Pioneers, p. 279, Melbourne, 1908.
- Green, J.—Vocabulary of Yarra Tribe. Smyth's Aborigines of Victoria II. pp. 99-115, 1878.
- , Vocabulary of Woewoorong, or Yarra Tribe. Ibid. II., p. 90, 1878.
- Hanks, W.—Aboriginal Camp near Coburg. Vic. Nat. 50, p. 34, 1933.
- Howitt, M. E. B.—Aborigines at Melbourne. Vic. Hist. Mag. III., p. 3, 1913.
- Howitt, R.—The Aborigines of Port Phillip. Australia, historical, descriptive and statistic, pp. 185-203, 1845, London.
- McCrae, G. G.—Some recollections of Melbourne in the Forties. Vic. Hist. Mag. II., pp. 120-23, 1912.
- Mackaness, G.—The Correspondence of John Cotton (hut building, tree climbing), Part I., pp. 24-25, Sydney, 1953.
- Meyrick, F. J.—Life in the bush (Native Doctor effecting a cure near Frankston), p. 133, Melbourne, 1939.
- "Old Bushman." Wheelwright, H. W.—Bush Wanderings of a Naturalist. p. 258, 1861, 1865, 1873 (London).
- Selby, Issac.—"The Honorable George Frederick Belcher and his reminiscences of Early Victoria" (Yarra Tribe). Vic. Hist. Mag. 15, pp. 87-88, 1935.
- Smyth, R. Brough.—Native names of places obtained from the aborigines of River Yarra Yarra. Smyth's Aborigines of Victoria II., p. 188, 1878.
- Sweetman, E.—History of the Merri Creek Aboriginal School, 1845-50. ANZAAS Report No. 22, p. 176, Melbourne, 1935.
- Thomas, W.—Succinct Sketch of the Aboriginal Language. Select Committee on Aborigines of the Legislative Council of Victoria, 1858-9, reprinted in Smyth's Aborigines of Vic. II., p. 118-133, 1878.
- Warner, Sir George, and Edge-Partington, J.—John Batman's Title Deeds. Man 31, 1915.
- Wedge, J. H.—Report of An Expedition from Van Diemens Land to Port Phillip in 1835, by J. Batman and others with remarks on the natives, Hobart, 1884.

Melbourne Surroundings—*continued*.

- Wedge, J. H.—A narrative of an excursion amongst the Natives of Port Phillip on the south coast of New Holland. Journ. and Pap., Parl. Tasm., vol. 5, No. 44, p. 18, 1885.
 ———, Note Book in Bonwick's "Port Phillip Settlement", London, 1887.
 Wilson, A.—John Batman's dealings with the Aborigines. Vic. Hist. Mag. VII., pp. 147-8, 1919.

MESSENGERS.

- Howitt, A. W.—Notes on Message Sticks and Messengers. Journ. Anth. Inst. 18, pp. 314-332, 1889.

MIDDENS.

- Chauncy, P.—On Native Ovens, with diagrams of one on Lake Connewarren, near Mortlake. Smyth's Aborigines of Victoria Appendix A., 2, p. 232, 1878.
 Gill, E. D.—Aboriginal Middens and Marine Shell Beds. Mankind 4 (6), p. 240, 1954.
 ———, Aboriginal Midden Sites in Western Victoria, dated by Radiocarbon analysis. Ibid. 5 (2), p. 51, 1955.
 ———, Peep into Prehistoric Aborigines Kitchen. Gliddon, J. W., "Phillip Island," p. 140, Melbourne, 1958.
 Hanks, W.—Aboriginal Camp at Coburg. Vic Nat. 50, p. 34, 1933.
 Horne, G.—Aboriginal coast camps of Eastern Victoria. Vic. Nat. 38, p. 48, 1921.
 Keble, R. A.—Kitchen Middens of the Mornington Peninsula. Ibid. XLV., p. 151, October, 1928.
 Kenyon, A. S.—Camping places of the Aborigines of S. East Australia. Vic. Hist. Mag. II., (3), pp. 97-110, 1912.
 Le Souef, D.—On the Shell-fish remains of aborigines. Vic. Nat. XIX., No. 1, p. 3, 1902.
 Le Souef, W. H. D.—Aboriginal Culinary Methods and Kitchen Middens. Vic. geogr. J. 32, (1), pp. 1-11, 1916.
 MacPherson, P.—The oven-mounds of the Aborigines of Victoria. Jour. Proc. roy. Soc., N.S.W., XVIII., p. 49, 1884.
 Mitchell, S. R.—Stone-Age Craftsmen. Melbourne, 1949.
 Spencer, Sir Baldwin, Kitchen Middens and Native Ovens. Vic. Nat. 35 (7), p. 113, 1918.

MILDURA.

- Jamieson, H.—Vocabulary of Yerre-yerre Tribe at Mildura. Smyth's Aborigines of Victoria II., p. 74, 1878.

MISSIONS.

- "The Aborigines."—The Illustrated Australian Magazine 3, p. 46, 1851.
 Aborigines Protection Society.—Reports 2 vols. Exeter Hall, 1839-40.
 Benson, C. I.—Centenary of Victorian Methodism. (Chapt. 3, 4). Melbourne, 1935.
 Bourke, Sir Richard,—Proclamation, 1836. Vic. Hist. Mag. III., p. 41, 1914.
 Boys, R. D.—First Years of Port Phillip, Melbourne, 1935, 2nd Edition, 1958.
 Centenary Council.—Victoria, the First Century, pp. 135-41, Melbourne, 1934.
 Charnay, D.—Rapports sur une Mission dans l'île de Java et en Australie (Coranderrk). 1881.
 Chase, S. L.—Moravian Mission at Lake Boga. Statement of the causes which led to its relinquishment, July, 1st, 1856 (Pamphlet). Melbourne.

Missions *continued.*

- Church of England.—Annual Reports of the Melbourne Church of England Mission. Reports 1 to 17, 1854-1871.
- Edgar, L. A. Among the Black Boys (Merri Creek School), London, 1865.
- Foxcroft, E. J. B. The N.S.W. Aborigines' Protectorate, Port Phillip District, 1838-50. Historical Studies, Australia and New Zealand I., pp. 76-84, 157-167, 1940-41.
- , Australian Native Policy. Melb. Uni. Press, 1941.
- , Mt. Franklin Station. Hist. Studies Aust., and N.Z. I., p. 161, April, 1941.
- Guardian of Aborigines. Reports, 1852-1853.
- Great Britain.—House of Commons. Copies of, or Extracts from, Despatches of the Governors of the Australian Colonies, with the Reports of the Protectors of Aborigines etc., 34, pp. 1-336, 1844.
- Hagenauer, F. A. Reports of the Aboriginal Station at Ramahyuck, Gippsland. Melbourne, 1874-1876.
- , Mission Work among the Aborigines of Victoria. Melbourne, 1880.
- , The Story of 25 years work at Ramahyuck. Melbourne, 1888.
- Hartmann, A.—The Blackfellow of Australia. Missionary Review of the World, N.S. 4, pp. 213-217, 461-65, New York, 1891.
- Moravian Mission. Report of the Moravian Mission at Lake Boga. Missionblatt aus den Brüdergeinende XVII., 1852.
- , Report No. 1, 1860, Report No. 2, 1861, Melbourne.
- N.S.W. Legislative Council. Votes and Proceedings, Select Committee on Aborigines, 1838, 1843, 1845, 1849, 1850.
- Osborne, R. The Aboriginal Station, Framlingham. The History of Warrnambool, pp. 193-99, Prahran, 1887.
- Scott, E.—Aborigines under Lonsdale's Administration. Vic. Hist. Mag. VI., p. 147-50, 1918.
- Shaw, E.—History of Coranderrk Aboriginal Station, Victoria. 12th Annual Report of the Aboriginal Group, 1941.
- , Early days among the Aborigines. Melbourne N.D. (about 1948).
- Sweetman, E.—Jubilee History of Victorian Education, 1872-1922. Melbourne, 1922.
- , History of the Merri Creek Aboriginal School, 1845-50. ANZAAS 22, Melbourne, 1935.
- Symons, J. C.—Life of Rev. Daniel James Draper. (Chapters on Aborigines and Education). Melbourne, 1870.
- Turner, H. G.—"The Aborigines and their Treatment," in his History of the Colony of Victoria I., p. 214-39, London, 1904.
- Victorian Aboriginal Group.—Annual Reports from 1929.
- Victorian Parliamentary Papers.—Return respecting the Mount Rouse Aboriginal Station, 1852.
- , Native Police. Return to address—Dr. Thompson, July 9, 1852.
- , Aborigines. Return to address—Mr. Parker, October 21, 1853. Parl. Pap. C33a/1853-4.
- , Aboriginal Protectorate on the Loddon. Return to address—Mr. Fawkner, November 4, 1853. Parl. Pap. C 40a/1853-54.
- , The Aborigines. Correspondence on the subject of crimes committed by the natives inter se, with an opinion of the Attorney General, 1858. Parl. Pap. A5/1858.

Missions—continued.

- Victorian Parliamentary Papers.—Report from the Select Committee upon Protection to the Aborigines together with the proceedings of the Committee, 1860. Parl. Pap. D19, 1859-60.
- , Report of the Central Board appointed to watch over the interests of the Aborigines of the Colony of Victoria. Six reports, numbered 1-6, (1861-9).
- , Aborigines. Return to an Order of the Legislative Assembly, dated 18th August, 1868, for (then follows 18 different questions). Parl. Pap. C10/1868.
- , Coranderrk Aboriginal Station. Return showing the Value of Produce of Cultivated Lands at Coranderrk. for the year 1868. Parl. Pap. A27/1869.
- , Report of the Board for the Protection of the Aborigines of the Colony of Victoria. 45 reports numbered 7-45 (1871-1909), 46-48 (1910-12), 49-51 (1922-25).
- , Royal Commission on the Aborigines. Report of the Commissioners appointed to inquire the present conditions of the aborigines of this colony, and to advise as to the best means of caring for, and dealing with them, in the future. Parl. Pap. 76, 1877.
- , Aborigines. Report and Correspondence relative to the mortality amongst residents of the aboriginal stations of Victoria, etc. Parl. Pap. 86, 1879.
- , Coranderrk aboriginal station. Report of the Board appointed to inquire into, and report upon, the present condition and management of the Coranderrk aboriginal station, together with the minutes of evidence. Parl. Pap. 5/1882.
- , Coranderrk aboriginal station. Remarks of the Board for the Protection of Aborigines on the report of the board appointed to inquire into and report upon the condition and management of the Coranderrk aboriginal station. Parl. Pap. 15/1822.
- , Report upon the operation of the Aborigines Act 1928, and the regulations and orders made thereunder. Presented . . . to the Governor in Council, 1957.

MITCHELL RIVER.

- Atkins, K. W.—Mitchell River Gorge. Vic. Nat. 69, pp. 112-115, January, 1953.
- Green, H.—A Gippsland Beauty Spot. Ibid. 40, pp. 77-82, 1923.
- Howitt, A. W.—Notes on the Devonian Rocks of North Gippsland (see pp. 214, 220, plate 21), 3rd Rep. of Progress Geol. Survey of Vic. 1875 (1876).
- Wakefield, N. A.—Den of the Nargun. Vic. Nat. 71, pp. 48-49, 1954.

MITCHELLSTOWN.

- Parris, H. S.—Early Mitchellstown and Nagambie. Vic. Hist. Mag. 23, pp. 128-132, 1950.

MOORABOOL.

- Curr, E. M.—The Jibberin Language spoken on the Moorabool. Curr's Aust. Race III., p. 518, 1887.

MOORERBAT.

- Curr, E. M.—Languages spoken in the neighbourhood of Lake Boga, probably at Moorerbat and on the Lower Loddon. Curr's Aust. Race III., p. 504, 1887.

MORNINGTON.

Mitchell, S. R.—A Set of Aboriginal Stone Tools. *Vic. Nat.* 64, No. 12, p. 235, 1948.

MORTLAKE.

Chauncy, P.—On Native Ovens, with diagram of one on Lake Connnewarren, near Mortlake. *Smyth's Aborigines of Victoria II.*, Appendix A, p. 232, 1878.

MORTON PLAINS.

Curr, E. M.—Language of Morton Plains. *Curr's Aust. Race III.*, p. 469, 472, 1887.

MOUNT BUFFALO.

Mitchell, S. R.—Aborigines on Mount Buffalo. *Vic. Nat.* LVI., (11), p. 184, 1940.

MOUNT BULLER.

Fisch, P.—Visit to Mt. Buller. *Vic. Nat.* 69, p. 150, 1953.

MOUNT EMU.

Wilson, Sir Samuel, *Vocabulary of Language spoken at Mount Emu.* *Curr's Aust. Race III.*, p. 516, 1887.

MT. FRANKLIN STATION (Jim Crow).

Foxcroft, E. J. B.—Mt. Franklin Station. *Hist. Studies, Aust. and New Zealand*, p. 161, April, 1941.

Victorian Parliamentary Papers.—Aboriginal Protectorate on the Loddon. Return to address—Mr. Fawcner, 4th November, 1853. *Parl. Pap.* C40a/1853-4.

MOUNT HOPE.

Curr, E. M.—The Panyool dialect of Mount Hope. *Curr's Aust. Race III.*, p. 510, 1887.

MOUNT ROUSE.

Curr, E. M.—Language of the Mount Rouse Tribe. *Curr's Aust. Race III.*, p. 488, 1887.

Public Library of Victoria.—Dialect of Mount Rouse Tribe, "Vocabulary of Dialects" compiled for Intercol. Exhib., Melbourne, 1867.

Victorian Parliamentary Papers.—Return respecting the Mount Rouse Aboriginal Station, 1852.

MOUNT TALBOT.

Public Library of Victoria.—Dialect of Mount Talbot Tribe, "Vocabulary of Dialects" compiled for Intercol. Exhib., Melbourne, 1867.

MOUNT WELLINGTON.

Hagenauer, F. A.—Vocabulary of Mount Wellington Tribe. *Smyth's Aborigines of Vic. II.*, p. 92, 1878.

Howitt, A. W.—A Visit to Lake Nigothoruk, and the Mount Wellington district, Gippsland. *Vic. Nat.* VIII., Pts. 2-3, p. 17, 1891.

MOUNT WILLIAM.

See Quarries and Lancefield.

MURCHISON.

- Curr, E. M.—Language spoken from Seymour to Murchison, part of the Goulburn River. Known as Ngooraiallum Language. Curr's Aust. Race III., p. 258, 1887.
- Dredge, J. W.—“Diary” (portion of) H. S. Parris' “Early Mitchellstown and Nagambie.” Vic. Hist. Soc. XXIII., (3), pp. 141-149, 1950.
- Tuckfield, F.—Specimen of language spoken by the Gnurelleean, or Natives West of Campaspee. Great Britain Parliamentary Papers 34, p. 227, 1844.

MURRABIT.

See Moorerbat.

MURRAY RIVER (Lower).

- Balfour, H.—Strangling cords from the Murray River, Victoria, Australia. Man 94, 1901.
- Beveridge, P.—A few notes on the dialects, habits, customs and mythology of the lower Murray Aborigines. Trans. and Proc. roy. Soc. Vic. VI., pp. 14-24, 1865.
- , Language spoken at Junction of Morcovia Creek and River Murray. Smyth's Aborigines of Victoria II., p. 72, 1878.
- , Vocabulary of Kulkyne Tribe. Ibid. II., p. 71, 1878.
- , Language spoken by the Watty-watty and Litchoo-Litchoo Tribes at Tyntyndyer. Ibid. II., p. 73, 1878.
- , Of the Aborigines inhabiting the great lacustrine and riverine depressions of the Lower Murray etc. Journ. and Proc. roy. Soc. N.S.W. 17, pp. 19-74. Sydney, 1884.
- Bulmer, J.—Aborigines of Lower Murray, Wimmera, Gippsland and Maneroo. Trans. Proc. roy. Geogr. Soc. Australia (Vic. Branch) V., Pt. 1, pp. 15-43, 1888.
- Cameron, A. L. P.—Notes on some tribes of New South Wales. (Deals also with Murray Tribes). Journ. Anthrop. Inst. 14, pp. 344-370, 1885.
- Corney, F.—Vocabulary of the Language of the Laitchi-laitchi Tribe at Bunbong, on the Murray River. Curr's Aust. Race III., p. 452, 1887.
- Curr, E. M.—Language of the Kulkyne Blacks. Ibid. III., p. 454, 1887.
- Gummow, B. W.—Ornaments worn by the Natives of the Lower Murray. Smyth's Aborigines of Vic. I., p. 277, 1878.
- , Native names of places on Lower Murray. Ibid. II., p. 175, 1878.
- Hughan, F.—Diseases of the Natives of Lower Murray. Ibid. I., p. 261 (note), 1878.
- Kenyon, A. S.—Aborigines and overlanders in “The Overlanders.” Vic. Hist. Mag. 10, p. 180, 1925.
- Kreff, G.—On the manners and customs of the Aborigines of the Lower Murray and Darling. Trans. phil. Soc. N.S.W., p. 375 (1865), 1862-1865.
- , On the vertebrata of the Lower Murray and Darling, their habits, economy and geographical distribution. (Native use of animals). Ibid. pp. 1-33, (1862), 1862-1865.
- MacIntyre, A.—Vocabulary of Kulkyne Tribe. Smyth's Aborigines of Victoria II., p. 70, 1878.
- McLeod, (?)—Phrases in the Laichi-laichi language. Curr's Aust. Race III., p. 438, 1887.
- Mathews, R. H.—Language of some Native Tribes. (Yotayota and Bureba). Journ. Proc. roy. Soc. N.S.W. 36, pp. 135-190, 1902.
- Public Library of Victoria.—Dialect of Lower Murray Tribe in “Vocabulary of Dialects” etc., compiled for Intercol. Exhib., Melbourne, 1867.

MURRAY RIVER (Upper).

- Andrews, A.—The First Settlement of the Upper Murray. Sydney, 1920.
 Matthews, D.—Native Tribes of the Upper Murray. Proc. roy. Geogr. Soc. S. Aust. 4, pp. 43-52, Adelaide, 1901.
 Mitchell, T.—Native names of Places in the Upper Murray District. Smyth's Aborigines of Victoria II., p. 174, 1878.
 ———, Language spoken on the Upper Murray. Curr's Aust. Race III., p. 562, 1887.
 Murdock, W. L.—Language. Science of Man. 3, No. 11, 1900.
 Public Library of Victoria.—Dialect of Upper Murray Tribe "Vocabulary of Dialects" compiled for Intercol. Exhib., Melbourne, 1867.
 Threlkeld, L. E.—Australian Language (Awakabal), mentions also Murray Tribes, Sydney, 1892.
 Tuckfield, F.—Specimen of Language spoken by the Pinegorine, or Natives of Junction of Goulburn with Murray. Great Britain Parliamentary Papers 34, p. 227, 1844.

MUSIC.

- Howitt, A. W.—Songs and Songmakers of Aust. Tribes. Journ. Anthropol. Inst. XVI., pp. 327-335, February, 1887.
 Torrance, G. W.—Music of the Australian Aboriginal. (Songs by W. Berak). Ibid. XVI., pp. 335-339, 1887.

MYTHOLOGY.

- Beveridge, P.—A few notes on the dialects, habits, customs and mythologies of the Lower Murray Aborigines. Trans. and Proc. roy. Soc. Vic. VI., pp. 14-24, 1865.
 Figgins, J.—Beginning of Puckapunyal Tribe in Maher, J. A. The Tale of a Century, p. 131, 1938.
 Howitt, A. W.—Native Myths—
 (1) Bowken, Brewin, and Bullundoot.
 (2) Aboriginal Legend of the Deluge.
 (3) The Port Albert Frog.
 (4) How the Blackfellows Lost and Regained Fire.
 (5) The Native Dog.
 (6) The History of Bolgan.
 Smyth's Aborigines of Victoria I., pp. 471-483, 1878.
 ———, On some Australian Beliefs. Journ. Anthropol. Inst. 13, pp. 185-198, 1884.
 ———, On the migration of the Kurnai Ancestors. Ibid. XV., p. 409, 1886.
 ———, Aboriginal Legends—
 (1) Legend of the Echidna and the Thunder.
 (2) The Story of how the Boukan stole the fire of the Kumai Tribe.
 Vic. Nat. VIII., p. 42, 1891.
 Howitt, M. E. B.—Folklore and legends of some Victorian Tribes (Manuscript) published by J. G. Fraser in "Native Races of Australasia, p. 21, 1939.
 Kenyon, A. S.—The Origin of the Yarra. "Heidelberg, City of Streams," 1934.
 McCrae, G. G.—Mamba—The Bright-Eyed. Melbourne, 1867.
 ———, The Story of Balladeaaro. Melbourne, 1867.
 Mathews, R. H.—Folklore of some Aboriginal Tribes of Victoria. Amer. Antiquar. 29, pp. 44-48, 1907.
 Parker, E. S.—Manners, customs and traditions of the Aborigines of the North Western or Loddon River District. "A History of New South Wales" by J. H. Braim 2, pp. 241-247, London, 1846.

Mythology—continued.

- Parker, J.—Dialect of the Jar-jow-er-ong Race with a short account of their traditional History and superstitions. Smyth's Aborigines of Victoria II., pp. 154-165, 1878.
- Ridley, W.—Report on Australian Languages and Traditions. Journ. Anthropol. Inst. 2, pp. 257-291, 1873.
- Stanbridge, W. E.—On the Astronomy and Mythology of the Aborigines of Victoria. Trans. phil. Inst. Vic. II., (2), pp. 137-40, 1858.
- Thomas, W.—(1) The Myth of Myndie, p. 446. (2) The Myth of Kur-bo-roo (Native bear). p. 447, note Smyth's Aborigines of Victoria I., 1878.

NAGAMBIE.

- Parris, H. S.—Early Mitchellstown and Nagambi. Vic. Hist. Mag. 23, pp. 128-132, 1950.

NATTY-YALLOOK.

- Curr, E. M.—Language spoken at Natty-Yallock and Stuart Mill. Curr's Aust. Race III., p. 514, 1887.

NUMURKAH.

- Tunnock, B.—Aboriginals in Numurkah District. Vic. Hist. Mag. 23, pp. 88-90, 1950.

OMEIO.

- Bulmer, J., Vocabulary of the Language spoken at Omeo. Curr's Aust. Race III., p. 558, 1887.
- Helms, R.—The Omeo Blacks. Proc. Linn. Soc. N.S.W. 2nd Series, X., p. 387, 1895.
- Mathews, R. H.—The Dhudhuroa language of Victoria. Amer. Anthropol. N.S. VII., pp. 278-284, 1909.

ORGANIZATION.

- Brown, A. R.—Notes on the social organization of Australian Tribes. Journ. roy. Anth. Inst. 68, pp. 222-253, 1918.
- Davidson, D. S.—The Basis of Social Organization in Australia. Amer. Anthropol. 28 (3), pp. 529-48, 1926.
- , The Family Hunting Territory in Australia. Amer. Anthropol. 30, pp. 614-31, 1928.
- , The Chronological aspects of certain Australian Social Institutions. Philadelphia, 1928.
- Gräbner, Fr.—Kulturkreise in Oceanien. Zeit. f. Ethn., 1905.
- , Zur Australischen Religionsgeschichte, Globus 96, 1909.
- Gregory, J. W.—"The relations of the Victorian Aborigines to those of Lake Eyre", in his "The Dead Heart of Australia", pp. 199-202, London, 1906.
- Howitt, A. W.—Notes on the system of consanguinity and kinship of the Brabrulong Tribe, North Gippsland. Smyth's Aborigines of Victoria II., appendix F., pp. 323-332, 1878.
- Howitt, A. W.—Australian Group Relations. Smithsonian Institution Annual Report, p. 809, 1883.
- , Notes on the Australian Class Systems. Journ. Anthropol. Inst. 12, pp. 496-510, 1883.
- , Further notes on the Australian Class System. Ibid. 18, pp. 31-68, 1889.
- , On the organization of Australian Tribes. Trans. roy. Soc. Vic. I. (2), pp. 96-137, 1889.

Organization—continued.

- Howitt, A. W.—Australian Group Relationships. Journ. roy. Anthropol. Inst. 37, pp. 279-289, 1907.
- Mathew, J.—The Origin, distribution and social organization of the inhabitants of Victoria before the advent of Europeans. Vic. Hist. Mag. I. (3), pp. 79-89, 1911.
- Mathews, R. H.—The Victorian Aborigines—their initiation ceremonies and divisional systems. Amer. Anthropol. II., pp. 325-343, 1898.
- Radcliffe-Brown, A. R.—The Social Organization of Australian Tribes. Oceania Monograph I., 1931. (Reprinted from Oceania, Vol. 1.)
- Röheim, G.—Australian Totemism. London, 1925.
- Thomas, N. W.—Dr. Howitt's Defence of Group Marriage. Folklore 17, p. 294, 1906.
- Wheeler, G. C.—The Tribe, and intertribal relations in Australia. London, 1910.

ORNAMENTS.

- Gummow, B. W.—Ornaments worn by the Natives of the Lower Murray. Smyth's Aborigines of Victoria I., p. 277, 1878.

PIANGIL.

- Curr, E. M.—Language spoken at Piangil. Curr's Aust. Race III., p. 450, 1887.
- Gill, E. D.—The Australian Aborigines and Fossils. Vict. Nat. 74 (7), p. 93, 1957.
- Macredie, T.—Vocabulary of the language spoken at Piangil.—Curr's Australian Race, III., p. 448, 1887.

PHILLIP ISLAND.

- Gill, E. D.—Peep into Prehistoric Aborigines Kitchen. Gliddon, J. W., "Phillip Island", p. 140, Melbourne, 1958.
- Gliddon, J. W.—Chapter on the Aborigines. "Phillip Island", Melbourne, 1958.
- Hardie, A. D.—Early settlement of Phillip Island (Western Port Tribe). Vic. Hist. Mag. 19, p. 100, 1942.

PHOTOGRAPHS.

- King Jonny of Banyenong "Past and Present", p. 18, Donald, June, 1926.
- Last of You Yang Tribe "Billie Leight", Weekly Times 27.4.1912.
- Barrett, C.—Photo of Tommy McCrae, the Aboriginal Artist. Vic. Nat. 52, p. 87, 1935.
- , and Kenyon, A. S., Kaawirn Kuunawarn, head man of the Kirroe Woorong Tribe, Western District. "Blackfellows of Australia", p. 2, Sun Nature Book N.D. (1936).
- , Queen Mary, Ballarat. Ibid., p. 8.
- , Yarruun Parpur Tarneen—Queen of the Morpor Tribe, Western District. Ibid. p. 28.
- Brownhill, W. R.—Photo of King Jerry of the Barrabool Tribe. The History of Geelong and Corio Bay, p. 35, Melbourne, 1955.
- Kenyon, A. S.—Photo of Whorlong (Euston Tribe). Vic. Hist. Mag. IV., p. 190, 1915.
- , Photo of Bil-li-bel-la-ry. "Heidelberg City of Streams" p. 35, 1934.
- , see Barrett, C., and Kenyon, A. S.
- Mathews, R. H.—Photo of Billy Berak (Last of the Yarra Tribe—taken four months before his death). Journ. Roy. Soc. N.S.W. 38, p. 243, 1903.
- Massola, A.—Jenny (Daughter of Queen Mary of the Goulburn), and her daughter Lizzie. Vic. Hist. Mag. XXVIII. (2), p. 54, 1958.

Photographs—continued.

- Wettenhall, R.—Photograph of Natives at Carr's Plain (Mallee), 1873. *Vic. Hist. Mag.* 21 (1), p. 29, 1945.
 Withers, W. B.—Photograph of last of Ballarat Tribe, in 1851. *History of Ballarat*, p. 8. 2nd Edit. only, Ballarat, 1887.

PHYSICAL.

- Birdsell, J. B., and Boyd, W. C.—Blood Groups in the Australian Aborigines. *Amer. J. phy. Anthropol.* 27 (1), p. 69, 1940.
 Boyd, W. C.—See Birdsell, J. B., and Boyd, W. C.
 Gill, E. D., and Manning, N. C.—Prehistoric Australian Aboriginal Skull with carious premolar tooth. *Aust. J. Dentistry* 54 (2), pp. 98-100, 1950.
 Graydon, J. J.—See Simmons, R. T., and Graydon, J. J.
 Halford, G. B.—The Crania of the natives. *Smyth's Aborigines of Victoria II.*, pp. 340-378, 1878.
 Manning, N. C.—See Gill, E. D., and Manning, N. C.
 Simmons, R. T., and Graydon, J. J.—The Rh Blood Types in Australian Aborigines. *Med. J. Aust.*, p. 113, July, 31st, 1948.
 Wood-Jones, F.—The dorsal hair tracts of the Australian Aborigines. *J. Anatomy* 69 (1), p. 91, 1934.

PINE PLAIN.

- Chauncy, P.—Additional names and words of the Natives of the Lower Loddon, Avoca, and Richardson Rivers and Pine Plains. *Smyth's Aborigines of Victoria II.*, pp. 209-12, 1878.
 Hagenauer, F. A.—Language of the natives of the Pine Plain Tribe, North Wimmera and generally understood in the Western District, the Loddon, and Swan Hill. *Ibid. II.*, pp. 39-48, 1878.

PLACE NAMES.

- Andrews, A.—The First Settlement of the Upper Murray. Sydney, 1920.
 Bulmer, J.—Native names of places in the vicinity of Lake Tyers, Gippsland. *Smyth's Aborigines of Victoria, II.*, p. 191, 1878.
 Chauncy, P.—Names of places and words obtained from the Aborigines belonging to the Tribes inhabiting the district watered by the Rivers, Loddon, Avoca, Richardson, Wimmera, and Upper Hopkins. *Ibid. II.*, p. 204, 1878.
 ———, Additional names and words of the natives of the Lower Loddon, Avoca, Richardson Rivers, and Pine Plains. *Ibid. II.*, pp. 209-213, 1878.
 ———, Supplementary list of Places and words from Natives at Camperdown, Ararat, Daylesford, Hopkins River. *Ibid. II.*, pp. 212-216, 1878.
 Crespigny, P. C.—Native names of Places in Talbot District, Victoria. *Ibid. II.*, p. 180, 1878.
 Gummow, B. W.—Native names of places on the Lower Murray. *Smyth's Aborigines of Victoria II.*, p. 175, 1878.
 Guthridge, J. T.—Aboriginal Place Names. *Vic. Hist. Mag.* 7, p. 143, 1919.
 Hagenauer, F. A.—Native names of places in the vicinity of Lake Wellington. *Smyth's Aborigines of Victoria II.*, p. 190, 1878.
 Hartmann, A.—Native names of places in the district of Lake Hindmarsh. *Ibid. II.*, p. 176, 1878.
 Howitt, A. W.—Names of places in Gippsland. *Ibid. II.*, pp. 188-90, 1878.
 Keble, R. A.—Kitchen Middens on the Mornington Peninsula. *Vic. Nat.* 45 (6), p. 151, 1928.

Place Names—*continued*.

- Lane, H. B.—Native names of Places in the vicinity of Warrnambool. *Ibid.* II., p. 186, 1878.
- Lane, H. B.—Native names of places in the Vicinity of Belfast. *Ibid.* II., p. 187, 1878.
- Lang, G. S.—Native Names of Places in Victoria. *Ibid.* II., p. 217, 1878.
- Learmonth, P.—Native names of Places in the Wannon District. *Ibid.* II., p. 177, 1878.
- McLeod, H. L.—Native names of Places in the Glenelg District. *Ibid.* II., p. 178, 1878.
- Martin, A. E.—Place Names in Victoria and Tasmania. Sydney, 1944.
- Mitchell, T.—Native names of Places in the Upper Murray District. *Smyth's Aborigines of Victoria* II., p. 174, 1878.
- Munro, N.—Native words and names obtained from Henry Traverer, Esq., of Kerang, Lower Loddon. *Ibid.* II., p. 218, 1878.
- O'Callaghan, T.—Names of Victorian Railway Stations. Melbourne, 1918.
- , Australian Place Names. *Vic. Hist. Mag.* VIII., pp. 23-38, 1920.
- Porteous, A.—Native Names of places in the District of Carngham. *Smyth's Aborigines of Victoria* II., pp. 178-179, 1878.
- Saxton, J. G.—Victoria Place Names and their origin. Clifton Hill (Melbourne), 1907.
- Scott, R.—Native names of places in the countries of Hampden and Heytesbury. *Smyth's Aborigines of Victoria* II., pp. 180-186, 1878.
- Surveyor-General's Office.—Native Names of Hills, Lakes, and other Natural features in Victoria. *Ibid.* II., pp. 192-204, 1878.
- Smyth, R. Brough.—Native names of places obtained from the Aborigines of the River Yarra Yarra. *Ibid.* II., p. 188, 1878.
- Thornley, N.—Some words of the language of the Western Tribes of Victoria (includes a large number of place names). *Ibid.* II., pp. 60-64, 1878.
- Tyers, C. J.—Native Names of several Hills, Rivers, &c. (1840). *Ibid.* II., p. 216, 1878.
- Wilson, S.—Native names of Places in the vicinity of Glenorchy. *Ibid.* II., p. 177, 1878.
- Withers, W. B.—Place names in Ballarat. *History of Ballarat*, 1st Edit. Ballarat, 1870, 2nd Edit. Ballarat, 1887.

POPULATION.

- Commonwealth of Australia.—Victoria—Native Population. *Year Book*, No. 17, pp. 952-953, 1924.
- , Victoria—Native Population. *Ibid.* No. 22, p. 915, 1929.
- , Early estimates of Native Population. *Ibid.* No. 23, pp. 690-693, 1930.
- , Victoria—Native Population. *Ibid.* No. 41, p. 347, 1955.
- , Victoria—Native Population. *Ibid.* No. 43, p. 583, 1957.
- Heaton, J. H.—Numbers of Aborigines in Victoria. *Australian Dictionary of Dates*, Part 2, p. 5, 1879, Sydney.
- Victorian Aboriginal Group.—1947 Census (208 full bloods, mostly from other States, 1,009 mixed). Report, 1953.
- Victorian Year-Book.—Aborigines in Victoria—given in all issues since its inception in 1873-4.

PORT FAIRY.

- Gill, E. D.—Aboriginal Midden Sites in Western Victoria, dated by Radio-carbon Analysis. *Mankind* V., p. 51, 1955.
- Lane, H. B.—Native names of Places in the Vicinity of Belfast. *Smyth's Aborigines of Victoria* II., p. 187, 1878.

PORTLAND.

- Curr, E. M.—Language spoken at Portland, Lake Condah, and Eumeralla. Curr's Aust. Race III., p. 490, 1887.
- Fyans, Capt. Foster.—Portland Bay affairs (References to the Natives by the Henty Brothers, &c.). Geelong Nat. 2nd Ser. I., p. 59, Sept., 1904, p. 80, Dec., 1904.
- Henty, R.—Australia, or my early life. London, 1886.
- Learmonth, N. F.—The Portland Bay Settlement. Portland, 1934.
- McLeod, J. N.—Vocabulary of Tourahonong Tribe at Portland. Smyth's Aborigines of Victoria II., p. 85, 1878.

PROTECTORS to the Aborigines, Report of.
See Missions.

PUKAPUNYAL.

- Figgins, J.—Beginning of Pukapunyal Tribe, in Maher, J. A. The Tale of a Century, p. 131, 1938.

PURALKA.

- Barrett, C.—The Puralka Flint. Vic. Nat. 43, p. 295, Feb., 1927.
- Mulvaney, D. J.—Research into the Prehistory of Victoria, a criticism and a field survey. Hist. Studies Aust. and N.Z. 8, No. 29, p. 42, 1957.

QUARRIES.

- Barnard, F. G. A.—Over the Dividing Range. Vic. Nat. 24, pp. 111-116, 1907.
- Blandowski, W.—Personal observations in the Central Parts of Victoria (Mt. William Quarry). Trans. phil. Inst. Vic. I., p. 56, 1857.
- "C.H.D."—A visit to the Aboriginal Stone-hammer quarries, Mt. William, Lancefield, Victoria. The Bankers Magazine of Australasia, pp. 582-585, 1894 (March).
- Davis, C. L.—A visit to the Aboriginal Stone-hammer quarries, Mt. William, Lancefield, Victoria. Science of Man I., p. 113, 1898.
- Gross, A.—Excursion to Mt. William. Vic. Hist. Mag. 27, p. 37, 1955.
- Guthridge, J. T.—The Stone Age, the Aborigines of the Lancefield District. Lancefield, 1907. 2nd Edit. with supplement, Lancefield, 1910.
- Hall, T. S.—Excursion to Mt. William, Lancefield (Geol. of Mt. William, and photo. of Quarry). Vic. Nat. 25, pp. 9-11, 1908.
- Kenyon, A. S.—Aboriginal Pigment Quarry (at Maryborough). Rec. geol. surv. Vic. 4 (4), pp. 478-9, 1917-25.

RAMAHYUCK.

- Hagenauer, F. A.—Reports of the Aboriginal Mission Station at Ramahyuck, Gippsland. Melbourne, 1874-1875-1876.
- , The Story of 25 years work at Ramahyuck. Melbourne, 1888.

REPORTS.

Government and Protectors—See Missions.

RESERVES.

See Missions.

RICHARDSON RIVER.

- Chauncy, P.—Names of Places and Words obtained from the Aborigines belonging to the tribes inhabiting the districts watered by the Rivers, Loddon, Avoca, Richardson, Wimmera, and Upper Hopkins. Smyth's Aborigines of Victoria II., pp. 204-212, 1878.
- McLachlan, R.—Vocabulary of Upper Richardson Tribe. Ibid. II., p. 80, 1878.

ROCK PAINTINGS.

- Adam, L.—Preliminary Report of the Melbourne University Expedition to Glen Isla. Melbourne University Gazette VI., No. 10, p. 96, December, 1950.
- , The Rock Paintings near Glen Isla, Victoria Range, Victoria. Mankind IV., p. 343, 1952.
- Barrett, C.—Brimgower, or "cave of fishes"—(1st Published account). Art of the Australian Aboriginal Barrett and Croll, p. 52, Melbourne, 1943.
- , (Brimgower Cave) New Primitive Art Gallery. Wild Life Magazine 5, No. 4, p. 125, April, 1943, Melbourne.
- , and Kenyon, A. S., Australian Aboriginal Art. Melbourne, 1929.
- Davidson, D. S.—Aboriginal Australian and Tasmanian Rock Carvings and Paintings. Mem. Amer. phil. Soc. V., p. 77, 1936.
- Kenyon, A. S.—Aboriginal Rock Paintings at Glen Isla, in Camping Places of the Aborigines in S.E. Australia. Vic. Hist. Mag. II., p. 97, 1912.
- , The Art of the Australian Aboriginal (Photo of Glen Isla Cave of hands). Vic. Nat. 54, No. 6, p. 91, 1937.
- , and Barrett, C. See Barrett and Kenyon, 1929.
- Massola, A. Aboriginal Paintings at the Flat Rock Shelter. Vic. Nat. 73, No. 2, pp. 21-23, 1956.
- , More Paintings on Flat Rock. Ibid. 73, No. 5, pp. 65-67, 1956.
- , Bunjil's Cave Found. Ibid. 74, No. 2, p. 19, 1957.
- , A Re-interpretation of "The Cave of the Serpent". Ibid. 74, No. 5, p. 63, 1957.
- , New Aboriginal Rock Paintings in Victoria Range. Ibid. 75, No. 5, p. 73, 1958.
- Mathew, J.—Notes on the Aboriginal Rock Paintings in the Victoria Range, County of Dundas, Victoria. Proc. roy. Soc. Vic. (N.S.) IX., pp. 29-33, 1897.
- Mitchell, S. R.—Petrographs in the Koetong Creek Valley. Vic. Nat. 70, p. 219, April, 1954.
- Tugby, D. J.—Conic Range Rock Shelter. Mankind IV., p. 446, Nov. 1953.
- , Rock Painting Sites. Actes du IV., Congres Inter. du Quaternaire Rome, p. 5, 1953.
- Walton, W. J.—Aboriginal Rock Paintings figured by D. S. Davidson in his recent Monograph. Mankind 2, No. 4, p. 96, 1937.

ST. ARNAUD.

- Palmer, Y. S.—The Aborigines of the Eastern Wimmera. "Track of the Years", pp. 54-63, Melbourne, 1955.

SALE.

See Flooding Creek.

SANDFORD.

- Jackson, J. H.—Vocabulary of the Wannon Tribe, Meerinygil, at Sandford. Smyth's Aborigines of Victoria II., p. 84, 1878.

SEYMOUR.

- Curr, E. M.—Language spoken from Seymour to Murchison, part of the Goulburn River—known as Ngooraiallum Language. Curr's Aust. Race III., p. 258, 1887.
- Tuckfield, F.—Specimen of language spoken by the Gnurelleean or Natives west of Campaspee. Great Britain Parliamentary Papers 34, p. 227, 1844.

SNOWY RIVER.

Bulmer, J.—Language spoken on the Snowy River. *Curr's Aust. Race* III., p. 560, 1887.

SORRENTO.

See Western Port.

STATIONS.

See Missions.

STATISTICS.

See Population.

STAWELL.

Massola, A.—Bunjil's Cave Found. *Vic. Nat.* 74, p. 19, 1957.

STOKES RIVER.

Tyers, C. J.—Vocabulary of the Language spoken by the Tribes inhabiting the Country about the Rivers Crawford, Stokes, and Lower Parts of the Wannon and Glenelg. *Smyth's Aborigines of Victoria* II., pp. 64-66, 1878.

STONE IMPLEMENTS.

Barrett, C.—The Puralka Flint. *Vic. Nat.* 43, p. 295, 1927.

Baker, G.—The Role of Australites in Aboriginal Customs. *Mem. nat. Mus. Vict.* 22 (8), 1957.

Campbell, T. D., and Walsh, G. D.—Aboriginal Implements from Camp Sites in the South of South Australia and Victoria. *Mankind* IV., p. 339, 1952.

Casey, D. A.—Flint Implement from Camperdown. *Mem. nat. Mus. Vic.* IX., p. 91, 1936.

Daley, C.—Remains of the Stone Age in Victoria. A.A.A.S., Brisbane, 1909.

Fisch, P.—Visit to Mt. Buller. *Vic. Nat.* 69, p. 150, 1953.

Gill, E. D.—The Australian Aborigines and Fossils. *Ibid.* 74 (7), p. 93, 1957.

Horne, G.—Aboriginal Stone Implements of South Eastern Victoria. A.A.A.S., Hobart, 1921.

Kenyon, A. S.—Stone Implements on Aboriginal Camping Grounds. *Vic. Nat.* XLIII., pp. 280-5, 1927.

———, and Mahony, D. J., Stone Implements of the Australian Aborigines. Guide to Collection in National Museum, Melbourne, 1914.

———, and Stirling D., Australian Aboriginal Stone Implements—a suggested Classification. *Proc. roy. Soc. Vic.* XIII, Part 2, p. 191, 1900.

McCarthy, F. D.—The Stone Implements of Australia. *Mem. Aust. Mus.* IX., 1946.

Mahony, D. J.—An Artefact probably of Pleistocene Age from Keilor, Victoria. *Mem. nat. Mus. Vic.* 14, Part 1, pp. 37-38, 1944.

———, and Kenyon, A. S. See Kenyon and Mahony, 1914.

MacPherson, P.—Stone implements of the Aborigines of Australia and some other countries. *Journ. Proc. roy. Soc. N.S.W.* 19, pp. 113-119, 1886.

Massola, A.—Some unusual Stone Artefacts. *Vic. Nat.* 76 (1), p. 8, 1959.

Mitchell, S. R.—At lower Tarwin. *Vic. Nat.* 48 (8), p. 161, 1931.

———, Unusual Type of Ground Edge Stone Implement. *Ibid.* 54 (3), p. 41, 1937.

———, Aborigines on Mount Buffalo. *Ibid.* 56 (11), p. 184, 1940.

———, The Mooney Collection of Aboriginal Stone Implements. *Ibid.* 62 (1), p. 10, 1945.

———, A Set of Aboriginal Stone Tools (Mornington Peninsula). *Ibid.* 64 (12), p. 235, 1948.

Stone Implements—continued.

- Mitchell S. R.—Stone-Age Craftsmen and Camping Places of the Australian Aborigines. Melbourne, 1949.
- Mulder, J. F.—Stone Implements of the Natives of Victoria and their Age. Geelong Nat. IV. (2nd Ser.), pp. 8-14, Aug., 1909.
- Pescott, E. E.—Aboriginal Stone Axes. Vic. Nat. 42, pp. 122-4, 1925.
- Stirling, D., and Kenyon, A.S. See Kenyon and Stirling, 1900.
- Tugby, D. J.—A Typological Analysis of Axes and Choppers from South-east Australia. Amer. Antiq. 24, p. 24, 1958.
- Walsh, G. D., and Campbell, T. D.—See Campbell and Walsh, 1952.
- , Ancient Mining Tools. Singular discovery of a stone implement or weapon at Ballarat. Dicker's Mining Record III., No. 7, p. 120, July, 1864.

STONE STRUCTURES.

- Casey, D. A.—Aboriginal Ceremonial Ground, Lake Wongan, Victoria. Vic. Nat. 54, pt. 9, p. 130, 1938.
- Chauncy, P. On Stone Structures in Western Victoria. Smyth's Aborigines of Victoria II., pp. 234-236, 1878.
- Kenyon, A. S. Stone Structures of the Australian Aborigines. Vic. Nat. 47, pp. 71-5, 1930.
- MacPherson, P. Circles of Stones about Oven-Mounds in "The Oven Mounds of the Aborigines of Victoria". Journ. Proc. roy. Soc., N.S.W., XVIII., pp. 53-55, 1884.
- Manifold, P. On Stone Structures in the Western District. Smyth's Aborigines of Victoria II., p. 235, 1878.
- Simpson, J. Y. Archaic Sculpturing of cups and circles, &c., upon stones and rocks in Scotland, England, and other countries. (Stone circles in Victoria, p. 95 note.) Edinburgh, 1867.
- Towle, C. C. A bibliography of Stone arrangements found in Australia. Mankind II. (7), p. 216, 1939.
- Wood Jones, F. The Aborigines of Victoria. A.N.Z.A.A.S. Handbook for Victoria, pp. 140-1, Melbourne, 1935.

STUART MILL.

- Curr, E. M.—Language spoken at Natty-Yallook and Stuart Mill. Curr's Aust. Race III., p. 514, 1887.

SUNBURY.

- Brunton, A. A.—An Aboriginal Burial Mound. Vic. Nat. 73 (5), p. 67, 1956.
- Casey, D. A.—Letter to Editor *re* reported Burial Mound. Ibid. 73 (7), p. 112, 1956.

SUPERSTITIONS.

- Dunn, E. J.—Australites. Bull. geol. Surv. Vict. 27, p. 14, 1912.
- Howitt, A. W.—On Australian Medicine Men. Journ. Anthropol. Inst. 16, pp. 23-59, 1887.
- Hughan, F. M.—Superstition regarding the burning of hair. Smyth's Aborigines of Victoria I., p. 464, note, 1878.
- Kreff, G.—On the Vertebrata of the Lower Murray and Darling, their habits, economy, and geographical distribution. Trans. phil. Soc. N.S.W., pp. 1-33, 1862-5 (1866).
- Parker, E. S.—Superstitions, reprinted from "Port Phillip Herald" in T. H. Braim's History of New South Wales 2, p. 241, London, 1846.

SWAN HILL.

Beveridge, J.—Vocabulary of the Language of the Swan Hill and Tyntynder Tribe. Curr's Aust. Race III., pp. 439-445, 1887.

Beveridge, P.—The Aborigines of Victoria and Riverina. Melbourne, 1889.
Public Library of Victoria.—Dialect of Swan Hill Tribe. "Vocabulary of Dialects", compiled for the Intercol. Exhib., Melbourne, 1867.

TALBOT DISTRICT.

Crespigny, P. C.—Native Names of Places in the Talbot District, Victoria. Smyth's Aborigines of Victoria II., p. 180, 1878.

TANGAMBALANGA.

Mitchell, T.—Vocabulary of Pallanganmiddah Tribe at Tangambalanga, Murray River. Smyth's Aborigines of Victoria II., p. 67, 1878.

TARWIN.

Mitchell, S. R.—At Lower Tarwin. Vic. Nat. 48 (8), p. 161, 1931.

TATIARRA.

Curr, E. M.—Language spoken in the Tatiarra Country. Curr's Aust. Race III., p. 458, 1887.

Haynes, W.—Vocabulary of the language spoken in the Tatiarra Country. Ibid. III., p. 456, 1887.

TERANG.

Eyre, E. J.—Report of Mr. Protector Sievwright "Cannibalism at Lake Tarong". Reprinted from G.B. Parliamentary Papers on Australian Aborigines for August, 1844, in Journals of Expeditions of Discovery into Central Australia II., pp. 255-58 note., London, 1845.

Siewwright, C. W.—Cannibalism at Lake Tarong. Great Britain Parliamentary Papers 34, p. 240, 1844.

TOCUMWAL.

Curr, E. M.—Language of the Pikkolatpan Tribe, of Tocumwal on the Murray. Curr's Aust. Race III., p. 584, 1887.

TONGALA.

Curr, E. M.—Recollections of Squatting in Victoria. Melbourne, 1883.

TRADE.

McCarthy, F. D.—Trade in Aboriginal Australia. Oceania IX., pp. 405-7, 1939.

TYNTYNDER.

Beveridge, J.—Vocabulary of the language of the Swan Hill and Tyntynder Tribe. Curr's Aust. Race III., pp. 439-445, 1887.

Beveridge, P.—Language spoken by the Watty-watty and Litchoo-litchoo Tribes at Tyntynder. Smyth's Aborigines of Victoria II., p. 73, 1878.

———, The Aborigines of Victoria and Riverina. Melbourne, 1889.

Kirby, J.—Old Times in the bush of Australia. Melbourne (N.D., about 1896).

ULUPNA.

Curr, E. M.—Language of the Toolinyagan Tribe at Ulupna. Curr's Aust. Race III., p. 586, 1887.

VICTORIA RANGE.

See Glen Isla.

WANGARATTA.

Murdock, W. L.—Language. Science of Man 3, No. 11, p. 188, 1900.

WANNON.

- Curr, E. M. Language of the Upper Glenelg and Wannon. Curr's Aust. Race III., p. 478, 1887.
 Learmonth, P. Native names of Places in the Wannon District. Smyth's Aborigines of Victoria II., p. 177, 1878.
 Public Library of Victoria. Dialect of Wannon-Yarlook Tribe. "Vocabulary of Dialects", compiled for Intercol. Exhib., Melb., 1867.
 Tyers, C. J.—Vocabularies of the Language spoken by the Tribes inhabiting the country about the Rivers Crawford, Stokes, and Lower Parts of the Wannon and Glenelg, 1842. Smyth's Aborigines of Victoria II., pp. 64-66, 1878.

WARFARE.

See Fighting.

WARRNAMBOOL

- Archibald, J.—Notes on the Antiquity of the Australian Aboriginal Race founded upon the Collection in the Warrnambool Public Museum. Trans. roy. Geogr. Soc. Aust/sia XI., pp. 22-25, 1894.
 —, The Discovery of the most ancient or Tertiary men in Australia. Science of Man I., p. 40, 1898.
 Branco, W.—Fusspuren in Australien, bei Warrnambool, Victoria und anderen orten. Zeit. Deutch. geol. Gesell, 56, pp. 114-121, Berlin, 1904.
 —, Die fraglichen fossilen Menschichen Fusspuren im Sandteine von Warrnambool, Victoria und andere angebliche spuren des fossilen Menschcen in Australien, Zeit. für. Ethn. 37, pp. 162-172, 1905.
 Carroll, A.—Evidence collected to establish the Discovery of the most Ancient Men in Australia. Science of Man I., p. 54, 1898.
 —, Further evidence to establish discoveries in Warrnambool Quarries. Science of Man I., p. 87, 1898.
 Keferstein, W.—Bemerkungen über das Skelett eines Australiens von Stamme Warrnambool. Nova Acta Acad. Caes. Leop-Car. 32 (1), 1865.
 Lane, H. B. —Native names of Places in the Vicinity of Warrnambool. Smyth's Aborigines of Victoria II., p. 186, 1878.
 Mahony, D. J.—On the bones of the Tasmanian Devil and other animals, associated with human remains near Warrnambool, with a note on the dune sand. Vic. Nat. XXIX., No. 3, p. 43, July, 1912.
 Mitchell, S. R.—An Aboriginal Bone Industry. Mankind 5 (5), p. 194, 1958.
 Musgrove, A. M. —Vocabulary of Warrnambool Tribe. Smyth's Aborigines of Victoria II., p. 86, 1878.
 Noetling, F.—Bemerkungen über die angebliche menschenspur in sandstein von Warrnambool (Vict.) Australien. Cent. für Min. Geol. und Palaeon, pp. 498-502, 2 figs., 1907.
 Officer, C. G. W.—The supposed human footprints in aeolian rock at Warrnambool. Vic. Nat. 8 (6), pp. 82-84, 1891.
 —, The discovery of supposed human footprints on Aeolian Rock at Warrnambool. Vic. Nat. 9 (2 and 3), pp. 32-39, 1892.

WATER SUPPLY.

- Cairns, J.—On the Weir Mallee, a water Yielding Tree. Trans. phil. Inst. Vic. III., pp. 33-34, 1859.
 Massola, A.—The Native Water Wells at Maryborough, Victoria. Vic. Nat. 73 (4), p. 48, 1956.
 —, The Native Water Well at Whroo, Goulburn Valley. Vic. Nat. 74 (3), pp. 41-44, 1957.

WEAPONS.

See Implements.

WESTERN DISTRICT.

- Bonwick, J.—Western Victoria, its Geography, Geology and Social Condition. Geelong, 1858.
- Chauncy, P.—On the Stone Structures in Western Victoria. Smyth's Aborigines of Victoria II., pp. 234-236, 1878.
- Dawson, J.—Australian Aborigines (Western District, Victoria), 1881.
- Frazer, J. G.—"The Booandik Tribe of Victoria" (from Mrs. James Smith: The Booandik Tribe of S. Aust. Aborigines, Adelaide, 1880). Native Races of Australasia, pp. 7-12, London, 1939.
- Gill, E. D.—Geological evidence in Western Victoria relative to the Antiquity of the Australian Aborigines. Mem. Nat. Mus. Vic. 18, p. 25, 1953.
- , Fluorine-Phosphate Ratios in relation to the Age of the Keilor Skull, a Tertiary Marsupial and other fossils from Western Victoria. Mem. Nat. Mus. Vic. 19, p. 196, 1954.
- , Aboriginal Midden sites in Western Victoria dated by Radiocarbon analysis. Mankind V., p. 51, 1955.
- , The Australian Aborigines and Fossils. Vict. Nat. 74 (7), p. 93, 1957.
- Great Britain Parliamentary Papers.—Papers Relating to the Aborigines. (Extracts from a report made by the Chief Protector of Aborigines (A. G. Robinson) of his proceedings on a visit to the country lying to the north of Portland Bay in the months from March to August, 1842.) 34, pp. 239-240, 1844.
- Kenyon, A. S.—The Aboriginal Protectorate of Port Phillip, being the "Report of an Expedition to the Aboriginal Tribes of the Western Interior by the Chief Protector, G. A. Robinson. Vic. Hist. Mag. 12, p. 134, 1928.
- Manifold, P.—On Stone structures in the Western District. Smyth's Aborigines of Victoria II., p. 235, 1878.
- Smith, Mrs. J.—The Booandik Tribe of South Australian Aborigines. Adelaide, 1880.
- Stewart, D.—Account of the Mount Gambier Blacks, and Vocabulary of the Booandik Tribe. Curr's Aust. Race III., pp. 460-65, 1887.
- Thornley, N.—Some words of the language of the Western Tribes of Victoria. Smyth's Aborigines of Victoria II., pp. 60-62, 1878.
- Tuckfield, F.—Specimen of language spoken by the Dautgart or Natives to the West of Colack. Great Britain Parliamentary Papers 34, p. 227, 1844.

WESTERN PORT.

- Bunce, D.—Australasiatic Reminiscences. 1st. Edition, pp. 62-79, Melbourne, 1857, 2nd Edition, Ibid., Melbourne, 1859, 3rd Edition, Ibid., Geelong, N.D.
- "H.C.J."—Remarks and Observations on the Habits and Customs of the Aborigines of the Western Port District, in the Province of Australia Felix. Port Phillip Magazine I. (1), January, 1843.
- Knopwood, R.—The Journal of the Rev. Robert Knopwood, 1803-4. J. Morgan's "Life and adventure of William Buckley", pp. 197-208, Hobart, 1852.
- Lee, I.—The Logbooks of the "Lady Nelson". (First contact with Victorian Natives, January 4, 1802—first natives fired on and wounded, February 17, 1802.) London, 1915.
- McCrae, G. G.—A Vocabulary of the Western Port Aborigines. Vic. Hist. Mag. 5, p. 164, 1917.

Western Port—*continued*.

Thomas, W.—Vocabulary of Boon-oor-rong Tribe at Western Port. Smyth's Aborigines of Victoria II., p. 90, 1878.

Tuckey, J. H.—An account of a voyage to establish a Colony at Port Phillip in Bass Strait (Reference to Western Port). London, 1805.

See also Arthur's Seat and Phillip Island.

WICKLIFFE.

Ferguson, W. H.—Evidence of the Antiquity of Man in Victoria. Vic. Nat. xi., pp. 87-90, 1894.

Gray, C.—Vocabulary of River Hopkins Tribe at Wickliffe. Smyth's Aborigines of Victoria II., p. 87, 1878.

———, Words in the dialect of the Tribes near Wickliffe. Ibid. II., pp. 58-60, 1878.

WILSON'S PROMONTORY.

Spencer, Sir Baldwin. Kitchen Middens and Native Ovens. Vict. Nat. 35 (7), p. 113, 1918.

WIMMERA.

Bulmer, J.—Aborigines of Lower Murray, Wimmera, Gippsland and Maneroo. Trans. Proc. roy. geogr. Soc. Aust. (Vic. Branch) V., pt. 1, pp. 15-43, 1888.

Chauncy, P.—Names of Places and Words obtained from the Aborigines belonging to the Tribes inhabiting the districts watered by the Rivers Loddon, Avoca, Richardson, Wimmera, and Upper Hopkins. Smyth's Aborigines of Vic. II., pp. 204-212, 1878.

Clow, J. M.—Wimmera Natives. "Letters from Victorian Pioneers", pp. 108-12, Melbourne, 1898.

Curr, E. M.—Language spoken at Lake Hindmarsh, upper regions, and lower Wimmera. Curr's Aust. Race III., p. 474, 1887.

Hagenauer, F. A.—Language of the Natives of the Pine Plain Tribe, North Wimmera, and generally understood in the Western District, the Loddon and Swan Hill. Smyth's Aborigines of Victoria II., pp. 39-48, 1878.

Livingstone, H.—Grammar and Vocabulary of the Minyung people. Trelkeld's "An Australian Language as spoken by the Awakabal", Sydney, 1892.

Palmer, Y. S.—The Aborigines of the Eastern Wimmera. "Track of the Years", pp. 54-63, Melbourne, 1955.

Wright, W. H.—Burial customs of Wimmera Aborigines. Smyth's Aborigines of Victoria I., p. 108, note, 1878.

WOODFORD.

Curr, E. M.—Language spoken at Woodford. Curr's Aust. Race III., p. 482, 1887.

YIELIMA.

See Yulima.

YULIMA.

Curr, E. M.—Language of the Ngarrimowro Tribe, near Yulima, on both sides of the Murray. Curr's Aust. Race III., p. 588, 1887.

AUTHOR INDEX.

- | | | | |
|---|----|----|---|
| A.A.A.S. | .. | .. | See Bibliography. |
| Aborigines Protection Society | .. | .. | Melbourne. |
| Adam, L. | .. | .. | Glen Isla, Rock Paintings. |
| Adam, W. | .. | .. | Antiquity, Keilor. |
| Archibald, J. | .. | .. | Antiquity, Warrnambool. |
| Arden, G. (Port Phillip Gazette) | .. | .. | General. |
| Atkins, K. W. | .. | .. | Mitchell River. |
| Backhouse, J. | .. | .. | General. |
| Baker, G. | .. | .. | Stone Implements. |
| Balfour, H. | .. | .. | Implements, Murray River Lower. |
| Banfield, L. L. | .. | .. | Ararat. |
| Baragwanath, W. | .. | .. | Antiquity. |
| Barnard, F. G. A. | .. | .. | Quarries. |
| Barrett, C. | .. | .. | Art, General, Glen Isla, Photographs,
Puralka, Rock Paintings, Stone
Implements. |
| Batman, J. | .. | .. | Melbourne. |
| Baylie, W. H. | .. | .. | Goulburn. |
| Benson, C. I. | .. | .. | Missions. |
| Beveridge, J. | .. | .. | Language, Swan Hill, Tyntynder. |
| Beveridge, P. | .. | .. | Echuca, Kulkyn, Language, Murray
River Lower, Mythology, Swan Hill,
Tyntynder. |
| Birdsell, J. B. | .. | .. | Lake Tyers, Physical. |
| Black, G. P. | .. | .. | Bibliography. |
| Blandowski, W. | .. | .. | Goulburn, Gunbower, Lancefield,
Quarries. |
| Board for the Protection of Aborigines
of Victoria | | | Coranderrk. Missions. |
| Boldrewood, R. (T. A. Browne) | .. | .. | Eumeralla. |
| Bonwick, J. | .. | .. | Geelong, General, Melbourne, Western
District. |
| Boyd, W. C. | .. | .. | Lake Tyers, Physical. |
| Boys, R. D. | .. | .. | Missions. |
| Branco, W. | .. | .. | Antiquity, Warrnambool. |
| Bride, T. F. | .. | .. | General. |
| Brownhill, W. R. | .. | .. | Geelong, Photographs. |
| Brown, A. R. | .. | .. | Organization. |
| Brown, P. L. | .. | .. | Melbourne. |
| Browne, T. A. (R. Boldrewood) | .. | .. | Eumeralla. |
| Brunton, A. A. | .. | .. | Burials, Sunbury. |
| Bulmer, J. | .. | .. | Gippsland, Lake Tyers, Language,
Murray River Lower, Omeo, Place
Names, Snowy River, Wimmera. |
| Bunce, D. | .. | .. | Language, Melbourne, Western Port. |
| Buntine, W. | .. | .. | Gippsland. |
| Cairns, J. | .. | .. | Food, Mallee, Water Supply. |
| Cameron, A. L. P. | .. | .. | Murray River Lower. |
| Campbell, T. D. | .. | .. | Antiquity, Cohuna, Stone Implements. |
| Cary, J. J. | .. | .. | Canoes, Colac, Geelong, Language. |
| Carroll, A. | .. | .. | Antiquity, Warrnambool. |

AUTHOR INDEX—*continued.*

- | | | | |
|---------------------------|----|----|---|
| Casey, D. A. | .. | .. | See Burials, Camperdown, Lake Wongan, Stone Implements, Stone Structures, Sunbury. |
| Centenary Council | .. | .. | Missions. |
| Charnay, D. | .. | .. | Coranderrk, Missions. |
| Chase, S. L. | .. | .. | Lake Boga, Missions. |
| Chauncy, P. | .. | .. | Ararat, Avoca, Camperdown, Daylesford, General, Hopkins River, Lake Connewarren, Lake Wongan, Language, Loddon River, Middens, Mortlake, Pine Plains, Place Names, Richardson River, Stone Structures, Western District, Wimmera. |
| C. H. D. | .. | .. | Lancefield, Quarries. |
| Church of England | .. | .. | Missions. |
| Clarke, H. | .. | .. | Language. |
| Cleland, J. B. | .. | .. | Food. |
| Clow, J. M. | .. | .. | Wimmera. |
| Commonwealth of Australia | .. | .. | Population. |
| Corney, F. | .. | .. | Bunbang, Language, Murray River Lower. |
| Cotton, J. | .. | .. | Corroboree, Goulburn, Melbourne. |
| Crespigny, P. C. | .. | .. | Place Names, Talbot. |
| Croll, R. H. | .. | .. | Art. |
| Curr, E. M. | .. | .. | Central Victoria, Dartmoor, Eumeralla, General, Gippsland, Geelong, Glenelg River, Goulburn, Hamilton, Healesville, Hopkins River, Kerang, Kulkyne, Lake Boga, Lake Condah, Lake Hindmarsh, Lake Wallace, Language, Loddon River, Mallee, Maps, Melbourne, Moorabool, Moorambat, Morton Plains, Mt. Hope, Mt. Rouse, Murchison, Murray River Lower, Natty-Yallock, Piangil, Portland, Seymour, Stuart Mill, Tatiarra, Tocumwal, Tongala, Ulupna, Wannon, Wimmera, Woodford, Yulima. |
| Daley, C. | .. | .. | Arthur's Seat, Food, Gippsland, Melbourne, Stone Implements. |
| Davenport, Mrs. | .. | .. | Barrabool, Language. |
| Davidson, D. S. | .. | .. | Art, Canoes, Distribution, Fire Making, General, Glen Isla, Implements, Langighiran, Maps, Organization, Rock Paintings. |
| Davis, C. L. | .. | .. | Lancefield, Quarries. |
| Dawson, J. | .. | .. | Western District. |
| Dennis, W. | .. | .. | Colac, Glenorchy, Language. |
| De Vis, C. W. | .. | .. | Antiquity. |
| Dredge, J. | .. | .. | General, Murchison. |
| Dunn, E. J. | .. | .. | Lake Condah, Superstitions. |

AUTHOR INDEX—*continued.*

- | | | | |
|---------------------------------------|----|----|--|
| Edgar, L. A. | .. | .. | See Melbourne, Missions. |
| Edge-Partington, J. | .. | .. | Melbourne. |
| Etheridge, R., Jnr. | .. | .. | Bibliography, Implements. |
| Eyre, E. J. | .. | .. | Burials, Cannibalism, Lake Boga, Lake Hindmarsh, Language, Terang. |
| Fawcett, L. | .. | .. | Lake Boga, Language. |
| Ferguson, W. H. | .. | .. | Antiquity, Wickliffe. |
| Figgins, J. | .. | .. | Mythology, Pukapunyal. |
| Finn, E. (Garryowen) | .. | .. | Gippsland. |
| Fisch, P. | .. | .. | Mt. Buller, Stone Implements. |
| Fison, L. | .. | .. | Distribution, General, Gippsland. |
| Flett, J. | .. | .. | Maryborough. |
| Foxcroft, E. J. B. | .. | .. | Missions, Mt. Franklin. |
| Foy, W. | .. | .. | Bibliography. |
| Francis, J. | .. | .. | Horsham, Lake Hindmarsh, Language. |
| Fraser, J. | .. | .. | Geelong, Language. |
| Frazer, J. G. | .. | .. | Western District. |
| Fyans, Capt. Foster. | .. | .. | Portland. |
| Garryowen, (E. Finn) | .. | .. | Gippsland. |
| Gellibrand, J. T. | .. | .. | Geelong, Melbourne. |
| Gill, E. D. | .. | .. | Antiquity, Camperdown, Keilor, Loruon, Middens, Phillip Island, Physical, Piangil, Port Fairy, Stone Implements, Western District. |
| Gliddon, J. W. | .. | .. | Phillip Island. |
| Godfrey, H. | .. | .. | Boort, Language, Loddon River. |
| Goodhall, W. | .. | .. | Hopkins, Language. |
| Gräbner, Fr. | .. | .. | Organization. |
| Gray, C. | .. | .. | Language, Wickliffe. |
| Graydon, J. J. | .. | .. | Lake Tyers, Physical. |
| Great Britain, (Parliamentary Papers) | .. | .. | General, Missions, Western District. |
| Green, H. | .. | .. | Mitchell River. |
| Green, J. | .. | .. | Coranderrk, Goulburn, Lake Condah, Language, Melbourne. |
| Gregory, J. W. | .. | .. | Antiquity, Organization. |
| Gross, A. | .. | .. | Lancefield, Quarries. |
| Guardian of Aborigines | .. | .. | Missions. |
| Gummow, B. W. | .. | .. | Murray River Lower, Ornaments, Place Names. |
| Guthridge, J. T. | .. | .. | Lancefield, Place Names, Quarries. |
| Hagenauer, F. A. | .. | .. | Gippsland, Lake Wellington, Language, Missions, Mt. Wellington, Pine Plain, Place Names, Ramahyuck, Wimmera. |
| Halford, G. B. | .. | .. | Physical. |
| Hall, C. B. | .. | .. | Grampians. |
| Hall, T. S. | .. | .. | Lancefield, Quarries. |
| Hamilton, J. C. | .. | .. | Bendigo, Burials. |
| Hanks, W. | .. | .. | Melbourne, Middens. |
| Hardie, A. D. | .. | .. | Phillip Island. |

AUTHOR INDEX—*continued.*

- | | | | |
|------------------------|----|----|--|
| Hartmann, A. | .. | .. | See Lake Hindmarsh, Language, Missions, Place Names. |
| Haydon, H. | .. | .. | .. General. |
| Haynes, W. | .. | .. | .. Language, Tatiarra. |
| "H. C. J." | .. | .. | .. Western Port. |
| Heaton, J. H. | .. | .. | .. General, Population. |
| Helms, R. | .. | .. | .. Omeo. |
| Henty, R. | .. | .. | .. Portland. |
| Hinkins, J. T. | .. | .. | .. General, Gunbower. |
| Hopton, A. J. | .. | .. | .. General. |
| Horne, G. | .. | .. | .. Gippsland, Middens, Stone Implements. |
| Houston, G. | .. | .. | .. Gunbower, Language. |
| Howitt, A. W. | .. | .. | .. Cannibalism, Canoes, Ceremonies, General, Gippsland, Implements, Languages, Maps, Messengers, Mitchell River, Mt. Wellington, Music, Mythology, Organization, Place Names, Superstitions. |
| Howitt, M. E. B. | .. | .. | .. Maps, Melbourne, Mythology. |
| Howitt, R. | .. | .. | .. Melbourne. |
| Hughan, F. | .. | .. | .. Diseases, Murray River Lower, Superstitions. |
| Hull, W. | .. | .. | .. General. |
| Jackson, J. H. | .. | .. | .. Languages, Sandford. |
| James, G. F. | .. | .. | .. Burials, Loddon River. |
| Jamieson, H. | .. | .. | .. General, Language, Mildura. |
| Jung, K. E. | .. | .. | .. General. |
| Keble, R. A. | .. | .. | .. Antiquity, Keilor, Language, Middens. |
| Keferstein, W. | .. | .. | .. Antiquity, Warrnambool. |
| Keith, Sir Arthur. | .. | .. | .. Antiquity, Cohuna, Keilor. |
| Kenyon, A. S. | .. | .. | .. Antiquity, Art, Burials, General, Glen Isla, Guides, Lake Condah, Langi-Ghiran, Mallee, Maryborough, Middens, Murray River Lower, Mythology, Photographs, Quarries, Rock Paintings, Stone Implements, Stone Structures, Western District. |
| Kenyon, J. | .. | .. | .. Language. |
| Kerr, J. H. (Resident) | .. | .. | .. General. |
| Kershaw, J. A. | .. | .. | .. Fighting. |
| Kirby, J. | .. | .. | .. Tyntynder. |
| Knopwood, R. | .. | .. | .. Western Port. |
| Kreffft, G. | .. | .. | .. Distribution, Murray River Lower, Superstitions. |
| Kyle, W. | .. | .. | .. General. |
| Lane, H. B. | .. | .. | .. Belfast, Place Names, Warrnambool. |
| Lang, G. S. | .. | .. | .. Place Names. |
| Lang, J. D. | .. | .. | .. General. |
| Langhorne, G. | .. | .. | .. Geelong. |

AUTHOR INDEX—*continued*.

- Mitchell, S. R. Ararat, Darbyshire, Implements, Mid-
dens, Mornington, Mount Buffalo,
Rock Paintings, Stone Implements,
Tarwin, Warrnambool.
- Mitchell, T. Language, Murray River Upper, Place
Names, Tangambalanga.
- Mitchell, Major T. L. General.
- Moravian Mission Lake Boga, Missions.
- Morgan, J. Geelong.
- Moseley, H. N. Coranderrk.
- Mueller, F. von Food, Language.
- Mulder, J. F. Stone Implements.
- Mulvaney, D. J. Antiquity, Bridgewater Lakes, Glenelg
River, Puralka.
- Munro, N. Kerang, Language, Loddon River,
Place Names.
- Murdoch, W. L. Art, Language, Murray River Upper,
Wangaratta.
- Musgrove, A. M. Language, Warrnambool.
- New South Wales, (Parliamentary Papers) General, Gippsland, Missions.
- Noetling, F. Antiquity, Warrnambool.
- Oakley, K. Antiquity, Keilor.
- Oberländer, R. General.
- O'Callaghan, T. Place Names.
- Officer, C. G. W. Antiquity, Warrnambool.
- Officer, C. M. Balmoral, Language.
- Old Bushman, (H. W. Wheelwright) Melbourne.
- Osburne, R. Framlingham, Missions.
- Palmer, Y. S. St. Arnaud, Wimmera.
- Parker, J. Language, Loddon River.
Maryborough, Mythology.
- Parker, E. S. Central Victoria, General, Language,
Loddon River, Mythology Super-
stitions.
- Parris, H. S. Mitchellstown, Nagambie.
- Pescott, E. E. Stone Implements.
- Pike, W. T. Geelong.
- Porteous, A. Carngham, Language, Place Names.
- Port Phillip Gazette, (Arden G.) General.
- Public Library of Victoria Goulburn, Guides, Lake Hindmarsh,
Lake Tyers, Language, Maryborough,
Mt. Rouse, Mt. Talbot, Murray River
Lower, Murray River Upper, Swan
Hill, Wannon.
- Radcliffe-Brown, A. R. Organization.
- Reid, D. Barnawartha, Languages.
- "Resident," (J. H. Kerr) General.
- Ridley, W. See Language, Mythology.

AUTHOR INDEX—*continued*.

- | | | | | |
|----------------------|----|----|----|---|
| Robarts, N. | .. | .. | .. | General. |
| Röheim, G. | .. | .. | .. | Organization. |
| Royal Commission | .. | .. | .. | Missions. |
| Russell, G. | .. | .. | .. | Geelong. |
| | | | | |
| Sandy, | .. | .. | .. | Gunbower, Language. |
| Saxton, J. G. | .. | .. | .. | Place Names. |
| Schmidt, P. W. | .. | .. | .. | Language. |
| Scott, E. | .. | .. | .. | Missions. |
| Scott, R. | .. | .. | .. | Hampden, Heytesbury, Place Names. |
| Scott, R. D. | .. | .. | .. | Camperdown, Language. |
| Selby, I. | .. | .. | .. | Melbourne. |
| Shaw, E. | .. | .. | .. | Coranderk, Missions. |
| Shaw, J. | .. | .. | .. | Lake Condah, Language. |
| Shillinglaw, J. | .. | .. | .. | Geelong. |
| Sievwright, C. W. | .. | .. | .. | Cannibalism, Terang. |
| Simmons, R. T. | .. | .. | .. | Lake Tyers, Physical. |
| Simpson, J. Y. | .. | .. | .. | Stone Structures. |
| Smith, J. | .. | .. | .. | General. |
| Smith, Mrs. J. | .. | .. | .. | Western District. |
| Smyth, R. Brough. | .. | .. | .. | Bark Engraving, Fire Making, General,
Lake Tyrell, Mallee, Maps, Mel-
bourne, Place Names. |
| Spencer, Sir Baldwin | .. | .. | .. | Guides, Koondrook, Middens. Wilson's
Promontory. |
| Spieseke, F. W. | .. | .. | .. | Lake Hindmarsh, Language. |
| Stähle, J. H. | .. | .. | .. | Lake Condah. |
| Stanbridge, W. E. | .. | .. | .. | Astronomy, Central Victoria, Daylesford,
Lake Tyrell, Language, Mythology. |
| Stewart, D. | .. | .. | .. | Language, Western District. |
| Stirling, D. | .. | .. | .. | Stone Implements. |
| Stone, A. C. | .. | .. | .. | Lake Boga. |
| Strutt, C. E. | .. | .. | .. | Echuca, Language. |
| Surveyor General | .. | .. | .. | Place Names. |
| Sutherland, A. | .. | .. | .. | General. |
| Sweetman, E. | .. | .. | .. | Melbourne, Missions. |
| Symons, J. C. | .. | .. | .. | Missions. |
| | | | | |
| Tapling, G. | .. | .. | .. | Ceremonies. |
| Thomas, N. W. | .. | .. | .. | Burials, Canoes, Organization. |
| Thomas, W. | .. | .. | .. | Avoca, Bushy Park, Diseases, Fighting,
Fire-making, Flooding Creek, General,
Language, Melbourne, Mythology,
Western Port. |
| Thornley, N. | .. | .. | .. | Language, Place Names, Western Dis-
trict. |
| Threlkeld, L. E. | .. | .. | .. | Language, Murray River Upper. |
| Tindale, N. B. | .. | .. | .. | Antiquity, Distribution, Maps. |
| Torrance, G. W. | .. | .. | .. | Music. |
| Towle, C. C. | .. | .. | .. | Bibliography, Stone Structures. |
| Tuckey, J. H. | .. | .. | .. | See Western Port. |

AUTHOR INDEX—*continued.*

Tuckfield, F.	..	..	Colac, Geelong, Goulburn, Language. Murchison, Murray River Upper, Seymour, Western District.
Tugby, D. J.	..	..	Antiquity, Darbyshire, Keilor, Rock Paintings, Stone implements.
Tunnock, B.	..	..	Numurkah.
Turner, H. G.	..	..	Missions.
Tyers, C. J.	..	..	Crawford River, Glenelg River, Lan- guage, Place Names, Stokes River, Wannon.
Vallois, H. V.	..	..	Antiquity.
Victorian Aboriginal Group	..	..	Missions, Population.
Victoria Government Year Book	..	..	Population.
Victorian Legislative Council	..	..	Missions.
Victorian Parliamentary Papers	..	..	Coranderk, Massacres, Missions, Mt. Franklin, Mt. Rouse.
Wakefield, N. A.	..	..	Mitchell River.
Walsh, G. D.	..	..	Stone Implements.
Walton, W. J.	..	..	Glen Isla, Rock Paintings.
Warner, Sir George	..	..	Melbourne.
Watson, M. (Melbournensis)	..	..	Geelong.
Wedge, J. H.	..	..	Melbourne.
Weidenreich, F.	..	..	Antiquity, Keilor.
Westgarth, W.	..	..	General.
Wettenhall, R.	..	..	Carr's Plain, Language, Photographs.
Wheeler, G. C.	..	..	Organization.
Wheelwright, H. W. (Old Bushman)	..	..	Melbourne.
Wilson, A.	..	..	Melbourne.
Wilson, C.	..	..	Horsham, Language.
Wilson, S.	..	..	Glenorchy, Place Names.
Wilson, Sir Samuel	..	..	Language, Mount Emu.
Withers, W. B.	..	..	Ballarat, Photographs, Place Names.
Wood-Jones, F.	..	..	Antiquity, General, Keilor, Physical. Stone Structures.
Worsnop, T.	..	..	General, Implements.
Wright, W. H.	..	..	Burials, Wimmera.
Wunderley, J.	..	..	Antiquity, Keilor.

